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Texas Production Above 60,000 Bbls.

Highest daily average estimated production week ended May 30, 1925, 2,347,984 bbls. Lowest in 1925, January 3, 1,911,730 bbls.

Ranks First Among Producing States. Market Outlook Unchanged, With Less Oil Going to Storage

By James McIntyre

Highest daily average estimated light oil production in 1925, week ended January 17, 1,525,220 bbls. Lowest in 1925, July 18, 1,374,173 bbls.

Texas produced an average of 601,451 barrels a day last week; a greater output than that of California, which was estimated at 600,000 barrels. Texas produced 134,351 barrels more daily than Oklahoma did in the same week and its production exceeded the combined output of Louisiana, Arkansas, Kansas, Montana, Wyoming, Colorado, New Mexico and all the eastern states, by over 50,000 barrels, and was greater by 22,191 barrels than the combined output of Oklahoma and Kansas. If the west Texas territory develops as much oil as expected, last week's total should not be the peak.

The fields of the United States produced 2,220,711 barrels a day last week. This was an increase of 6,898 barrels a day over the record of the previous week, of which increase 1,792 barrels was of light oil. Gains were registered in the Panhandle, the Gulf Coast, California and the Rocky Mountain fields. Oklahoma, Kansas, north central and west Texas showed little difference.

A new deep horizon was discovered in the Spindletop Field, in Texas; a 7-mile extension was made to the Carson County Field in the Panhandle by the Roxana Petroleum Corporation, with a 1,200-barrel initial producer, while in the Hurdle district, in the Crane-Upton Field in west Texas, the Dixie Oil Company's No. 7 Burleson has the earmarks of a large producer and in the old Sunshine Pool in Wichita County, Texas, a 1,250-barrel well has caused much interest. The Seminole Pool, the most promising field in Oklahoma reached a production in excess of 22,000 barrels a day on Tuesday, but indications of structural irregularities make the outlook somewhat uncertain for companies which have invested big money in drilling operations.

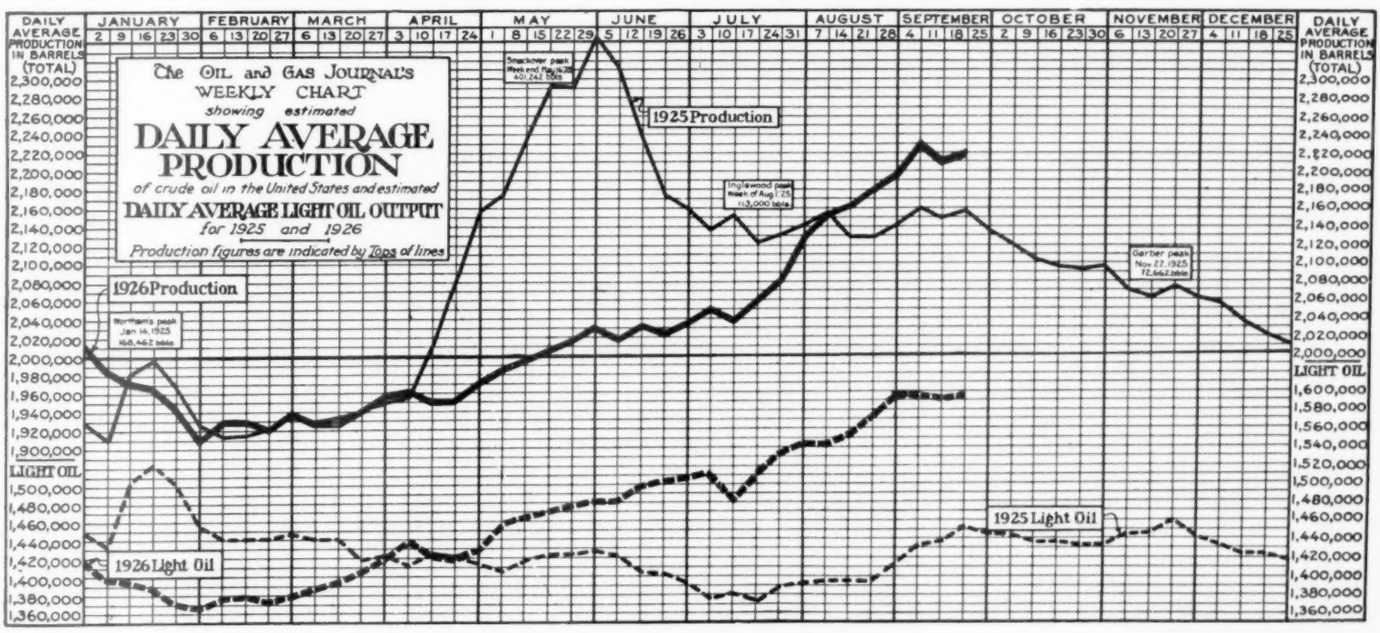
The crude situation in the Mid-Continent remains as it was last week. Changes in the market wherever they have occurred lately have been put down as "local situations." Panhandle operators are drilling to the top of the sand and shutting down, where they have no immediate outlet for increased production, which eases up the situation there. Less crude oil is being run from storage in Oklahoma and Kansas than for some time past and the Prairie Oil & Gas Company, the largest crude buyer in the two states, is said to be running a small quantity of oil to storage. The total withdrawals from storage at this time in the Oklahoma-Kansas area are about 25,000 barrels a day. The withdrawals have been as high as 100,000 barrels a day this year.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity crude oil in the United States for week ended September 18, and a comparison with the previous week follows:

	Sept. 18		Sept. 11	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	39,285		40,620	
Burbank	47,810		49,060	
Other Osage Fields	34,020		34,200	
Cushing and Shamrock	21,450		21,500	
Bristow and Eastern Bristow	27,500		27,610	
Cromwell	15,475		15,620	
Garber	29,030		29,400	
Blackwell-Braman	22,140		21,960	
Seminole	20 260		17,345	
Wewoka	30,040		30,430	
Northern Miscellaneous	115,100		114,600	
Southern Fields	65,060		64,900	
Total Oklahoma	467,110		467,245	
North Louisiana	42,200	14,255	42,415	13,535
Arkansas—				
Smackover	14.620	119,310	14,765	120,375
Miscellaneous	18,515		19,085	
Total Arkansas	33,135	119,310	33,850	120,375
North Central and West Texas	187,385		187,167	
Texas Panhandle	120,815		117,729	
Powell	27,600		27,750	
Mexia, Currie, Richland	14,945		14,375	
Nigger Creek	17,600		19,100	
Wortham	6,470		6,550	
Kansas	112,150		112,550	
Total Mid-Continent Area	1,029,410	133,565	1,028,731	133,910
Gulf Coast		193,701		191,785
Southwest Texas		45,525		43,990
Eastern	109,300		109,000	
Rocky Mountain Area	109,210		106,897	
California—				
Santa Fe Springs	48,500		48,500	
Long Beach	97,000		98,500	
Huntington Beach	45,500		45,000	
Torrance	5,000	22,500	5,000	23,000
Dominguez	22,500		23,000	
Rosecrans	13,500		14,000	
Inglewood	25,700	18,300	25,700	18,300
Ventura Avenue	49,000		50,000	
Remainder of State	42,500	210,000	41,000	207,500
Total California	349,200	250,800	350,700	248,800
Total United States	1,597,120	623,591	1,595,328	618,485
Grand Total	2,220,711		2,213,813	

Total Increase, 6,898 Bbls.; Light Oil Increase, 1,792 Bbls.



WHAT AND WHERE TO BUY—PAGES 165-166-167

Oklahoma Refined Prices Decline

Distillate One of Few Products to Continue Tight. Demand for Gasolines, Fuel Oil and Kerosene Slow

By Neil Williams

Distillates were practically the only products which continued tight and strong on the Oklahoma (Group 3) refined market the past week. Price trends of all gasolines, including natural gasolines, kerosenes and fuel oils were downward, and even gas oil was easier than it has been for several months.

There was an exceptionally brisk demand for low cold test distillates, which accounted for the continued tightness of these grades, and sellers were holding these for even greater premiums than before. Buyers were offering to pay as high as 6 cents a gallon for either immediate or future shipment.

A decided weakening of gasoline prices developed the middle and latter part of last week, and some material was purchased at bargain prices, but Monday and Tuesday a more or less steadier tone prevailed, with markets from an eighth to a quarter cent below what they were a week ago.

Taking the past week as a whole, gasoline markets were extremely quiet, but Monday and Tuesday an increase in inquiries were enjoyed by some refiners. This improvement in demand with the opening of this week, although orders were not large and only for spot shipment, led market students to believe that much better conditions might follow later in the week.

It still is the opinion of sellers that a fair run of good weather throughout the Mid-Continent's marketing territory at this time would bring out a sufficient demand for motor fuel to warrant a marked strengthening in prices. Despite the sluggishness of markets the past two weeks, Oklahoma refiners as a whole still are not particularly burdened with any great amount of excess material. A few sellers have been anxious to move gasoline, but on the other hand many are sold up for the remainder of the month.

REFINED MARKET BAROMETER

Although firm in spots, refined markets of the country were more or less unsettled the past week. The almost general weakness which prevailed in the Mid-Continent and Chicago areas was augmented by spotted markets in other refinery centers. Gasolines were disturbed in eastern and California areas by both retail and wholesale price cutting, while in other districts uncertain crude and tankwagon conditions proved bearish influences. The volume of gasoline business was reported greater at many places which served to hold market prices, but this was not true in the Mid-Continent, where price concessions followed a week of dull trading. The general kerosene tone was soft, although Atlantic Seaboard markets were firm with renewed demand. The furnace oil demand was particularly active, which was responsible for this firmness and also for the continued strength of distillates in other areas. Fuel oil and gas oil were quiet in the Mid-Continent and Chicago districts, and prices were reduced substantially there to encourage trading, but with little success. Natural gasolines quiet, the situation in California still being weakened by greatly increased production. Lubricants were spotted.

Mid-Continent—Refined markets generally weaker with demand light. Only distillates continued tight as demand for low cold test furnace oils increased. Gasolines from eighth to quarter cent lower than week ago. Fuel oils off from 2½ to 5 cents a barrel on all grades. Kerosene felt sharp softening as more material became available. Natural gasolines slower.

Atlantic Seaboard—More favorable gasoline consumption weather aided eastern refiners in holding gasoline prices. Price cutting active in some areas. Kerosene found bigger demand. Fuel oil and gas oil firm. Cylinder stocks strong, but red and pale oils dull. Wax steady.

Pennsylvania—Gasoline markets steadier, but kerosene easier. Prices of latter product believed at peak as concessions become more general. Fuel oil in better demand. Lubricants unchanged.

Chicago—Gasoline demand light, due to continued bad weather. Kerosene offerings more free. Distillate inquiries still active, but movements slower. Gas oil easier. Soft tone in fuel oils.

California—Three-cent tankwagon reduction at Los Angeles causes generally uncertain feeling regarding refinery gasoline situation in California. Volume of consumption satisfactory, but price cutting general. Lubricants active.

Gulf Coast—Unchanged.

Dangerous Margins

However, it cannot be denied that gasoline markets are very uncertain, but this is only natural considering the doubtful crude situation and the unsettled tankwagon structure. There are many in the trade who continue optimistic regarding the crude market and cannot see a reduction in the immediate future, but so long as general conditions indicate a weakened crude foundation buyers are not going to take many chances of being caught with much gasoline, or other refined products, on hand.

While usually gasoline tankwagon changes by the Standard Oil Co. of Indiana follow general changes in Mid-Continent crude, a reduction in postings throughout the territory of this company is not impossible at this time, although crude prices continue steady. This, as explained before, is due to the dangerous margins which prevail between tank car and tankwagon prices.

This also is adding to the generally uncertain refined markets, preventing buyers from having much confidence in the situation, although they might not fear a crude reduction. It is known that the refined market cannot go much lower without a general tankwagon cut, but, on the other hand, if refined markets take a decided turn for the better a tankwagon reduction might be held off.

A question naturally arises as to which will be the deciding factor in gas-

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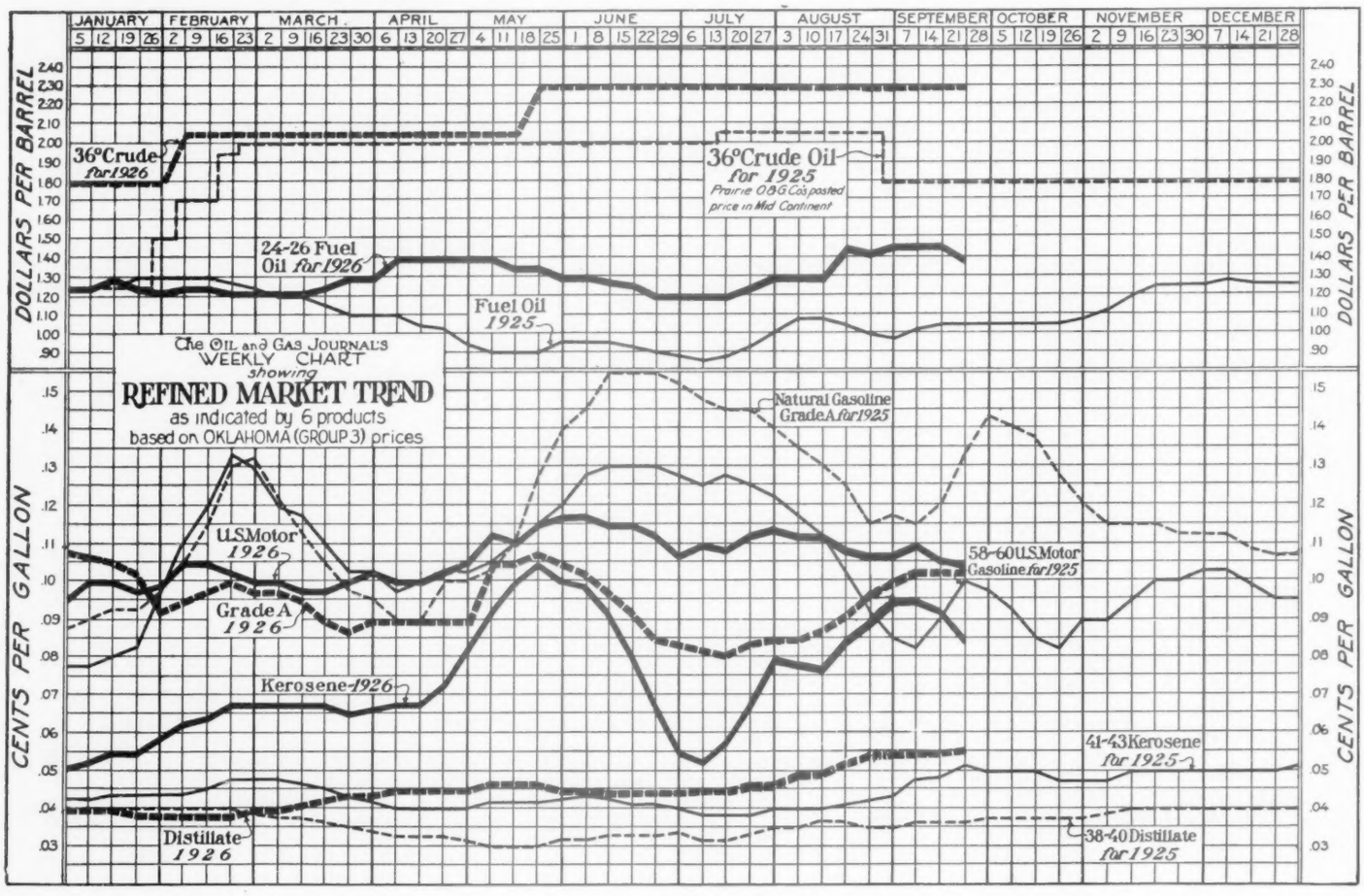
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
DOLLARS PER BARREL
CENTS PER GALLON
36° Crude for 1926
24-26 Fuel Oil for 1926
Fuel Oil 1925
36° Crude Oil for 1925
Prairie O&G Co posted price in Mid Continent
The Oil and Gas Journal's WEEKLY CHART showing
REFINED MARKET TREND
as indicated by 6 products based on OKLAHOMA (GROUP 3) prices
U.S. Motor 1926
Grade A 1926
Kerosene 1926
Distillate 1926
Natural Gasoline Grade A for 1925
58-60 U.S. Motor Gasoline for 1925
41-43 Kerosene for 1925
38-40 Distillate for 1925

Next Sale Offers Good Wildcat Play

Numerous West Side Leases Will Be Put Up At Osage Sale at Pawhuska on September 30

By James McIntyre

Osage sales have lost much of their romantic glamour. Perhaps never again will men representing vast financial interests quietly sit and with nod of the head or upraised finger hike bids for leases from a base price of a quarter of a million, upward at the rate of $50,000 or $100,000 until Auctioneer Walters of Skeedee, Okla., unused to such large figures, pauses in utter bewilderment. Perhaps never again will 160 acres of land, with no assurance of its being worth anything, bring $1,990,000.

Notwithstanding Osage sales have lost much of their old-time kick, the coming one to be held in Pawhuska on Thursday, September 30, offers some interesting plats and a lot of wildcat leases that will be snapped up at prices worth while if the prices are officially O.K.d by the Department of the Interior.

An Osage lease is considered by many oil operators as not as desirable, nor worth as much as equally promising territory in some other parts of Oklahoma. The buyer purchases an oil lease only. He has no right to any more gas than he can use on the property. He is tied up with restrictions unknown in other fields. The leases call for a higher royalty payment than he has to pay in other fields. Many operators stay out of Osage County altogether, preferring to "play" in the less restricted fields. The big bidding has been confined to a few of the large oil companies, particularly the Carter, Prairie, Sinclair, Skelly, Cosden, Empire, Phillips and Gypsy companies, all of which paid $1,000,000 or more for one or more leases. We don't see the Magnolia Petroleum Co., the The Texas Company, the Comar, Roxana, Tidal, Pure or Marland interests bidding in the million-dollar class, although they have the money to do it, and we never see Lew Wentz or Tom Slick up there with their index finger in the air nonchalantly bidding a million for Osage acres, even though both are big operators. The writer will not attempt to say why some companies are rarin' to go at every Osage

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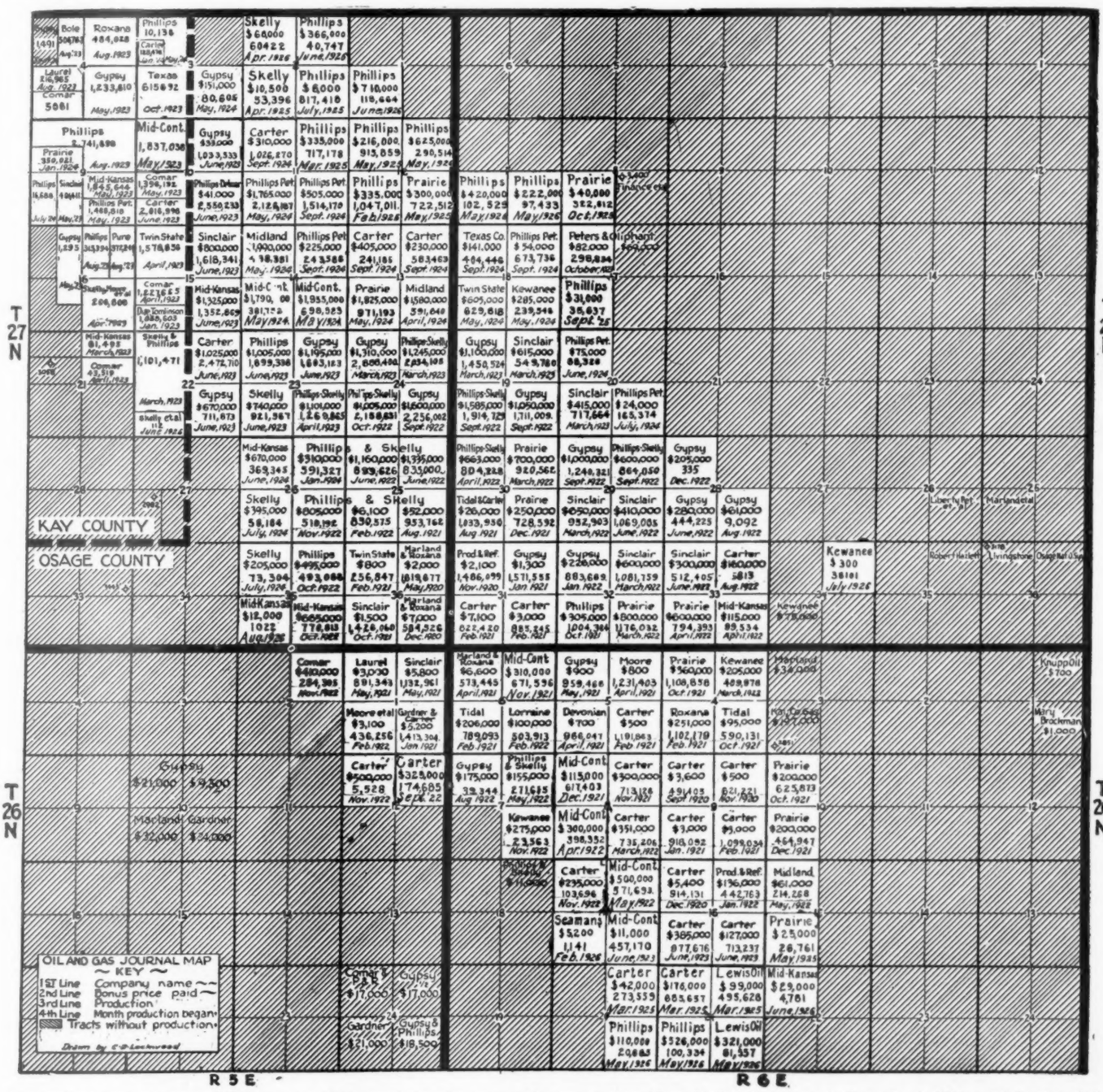


The Burbank Field in Osage and Kay Counties, Oklahoma, showing lease ownership, bonus price paid, production of leases up to September 1, 1926, and date when first production was reported.

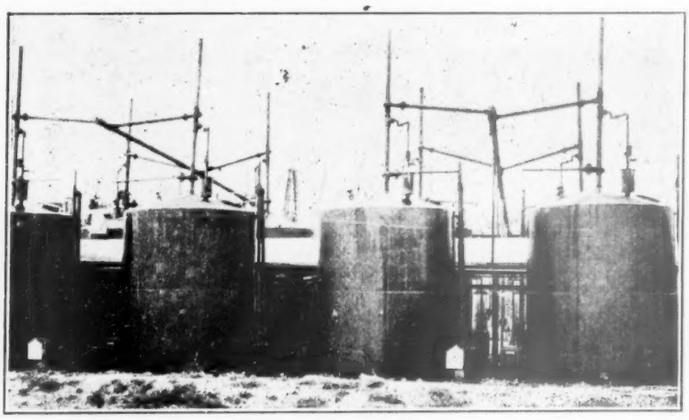
Electric Dehydration at Smackover

Treatment of Gulf Refining Co. Saves Loss of Gasoline Content; Avoids Lowering Gravity and Production Loss

By James H. Dameron

EL DORADO, Ark., Sept. 18.—The making of pipeline oil of crude from most Louisiana and Arkansas fields has been an intricate task that producing pipeline companies have spent young fortunes on in search of consistent and efficient methods. Of all the fields in the district, Smackover brought with its discovery a treating problem equally as big as the field. It had to be worked out both by the production and pipeline departments because the latter had millions of barrels of Smackover heavy in earthen storage.

The treatment of the heavy oil was frequently referred to by many experimenting for better methods as the mistreatment of Smackover because the old methods of treating the fluid were inconsistent and unsatisfactory. Not only were cooking vats inconsistent but the amazing loss in gasoline content of the oil, loss of production and lowering of the gravity of the oil reflected itself impressively on the loss side of the profit and loss sheet.



Arrangement of pumps, gauges and valves beneath the sheltered part of the treating plant.

With the flush off and the pool gradually declining major producing companies and their affiliated pipeline companies set about a few months ago to work out the problem on a scientific basis and with the determination to turn the stream of dollars going into the loss column into a channel of profits. The first several months of those companies' efforts were devoted principally in the treating of fresh production while some improvement has been made in the treating of the millions of barrels in pits.

Gulf Co. Pioneer

The Gulf Refining Co., ranking producer of the majors, was one of the pioneers in the program to curtail the loss in making pipeline oil from fresh production. It likewise contributed to the improving of methods of treating the pit oil stored in those huge earthen reservoirs when there was nothing else to do with the flood of production. The Gulf company sent a small corps of chemists into the field to make a study of conditions and make recommendations. They were aided by pipeline and production department heads.

Their first work was in obtaining improvements in treating fresh production. The Gulf company, along with the vast majority of producers there, was cooking the b.s. from the oil. It was estimated that 90 per cent of the production in Smackover was treated in that manner. Some fluid was treated readily with chemicals. No two cooking plants were identical, each produer's system varying in some minor respect from that of the neighboring plant. By using this system fluid from the wells was pumped into pits on the lease to be later picked up and run through the cooking vats. The oil lost some of its gasoline content while in the pits. Cooking resulted in an added loss of gasoline content and the lowering of the gravity.

After an experiment the Gulf company decided electric dehydration was the most profitable, consistent, cheapest in operation and costing the least in the long run, although, installation of such a plant was far greater than the initial cost of other plants.

Experiments Show Advantage

On designated leases all of the Gulf company's wells were tested separately, the gravity and production checked the peculiarities of each well was given minute study. It was found that oil from wells producing 20 to 21 gravity oil lost from 1 to 2 degrees in gravity and from 3 to 4 per cent of its gasoline content when run into the pits. After being picked up from the pits and run through the company's old treating plant it lost an additional 1 degree of gravity and an additional 2 to 4 per cent in gasoline content. In addition the pipeline oil had a high viscosity and was more troublesome to the pipeline companies. Further tests revealed that in wells producing 22 gravity oil the oil lost as high as 10 per cent of its gasoline content before it reached the pipelines and likewise had a high viscosity.

Experiments showed several advantages of the electric dehydration system, although its initial cost was far greater than the general systems of treating Smackover crude. A battery of eight electric dehydrators was installed on one large lease and a 4-battery plant erected on another. With the installation of the new plants the pipeline department changed the gathering system of the leases and ran the oil directly from the well to service tanks on one side of the treating plant.

Now fresh production never sees the light of day. It goes direct from the wells to the electric plant, from there to the pipelines and straight to the refineries. The packers have nothing on the oil men in economy so far as that particular lease is concerned because with the electric system not even the "smell" of crude is lost. The first 3 or 4 per cent of gasoline content is saved and it is the contributing factor that lowers the viscosity of the oil, an item of great interest to the pipeliners. The operating cost of the plant is less and the treating plants are as clean as pump stations and not the sloppy and oily sites that marked the old plants.

Small Lease Example

One of the Gulf company's small leases is an excellent example of the curtailing of the loss so common in Smackover and will be of interest to the small producer. This particular lease had three wells on it, one well producing 31 gravity oil. Formerly the lease's production had been pumped into pits, later to be picked up and treated with chemicals and run through the steam vat. When the production was treated in that manner the lease's daily average production was 87 bbls. of 24.2 gravity pipeline oil with less than 2 per cent b.s.

After an analysis of the oil it was found the lease would produce 105 bbls. of oil with the gravity of the oil restored to 30 degrees when run through the electric plant. During the time that lease was being tested nothing was done to the wells in an effort to increase their output of fluid.

The result was an increase of 18 bbls. in production and the oil's gravity was restored, thereby making that oil command 15 cents more per barrel on the market. In addition the viscosity of the oil was four times lower at 55 than the identical oil when run through the steam plant. In short, an exceptionally good Smackover pipeline oil was obtained, increased production at higher market value and the first 3 or 4 per cent of gasoline saved. Further experimenting revealed practically the same results could be obtained with chemicals. Because of the lease's isolation from the electric plants and the cost of running a line from that lease to the plant that crude is being treated with chemicals.

It is significant to note that while all other leases in Smackover this year are showing a decline the Gulf company's leases on which the electric dehydrators are located, are showing an increase. It is not a large increase nor are the wells making more oil but more oil is being saved. Disregarding the profit in saving the loss in gasoline content of the oil, the restoration of gravity and the increase in production, the Gulf company's electric plant is much cheaper to operate. It is estimated that it costs about 1½ cents per barrel to treat the oil.

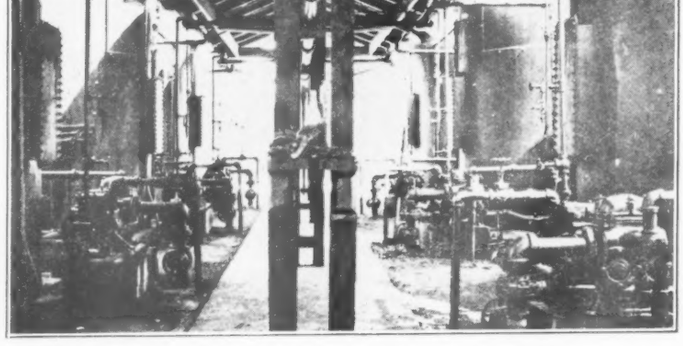
The power bill is one of the big operating cost items and it costs around $100 a month to supply current for the electric plants. A high line runs close by the Gulf company's lease. Fluid with around 30 per cent b.s. yields around 80 per cent net oil after being run through the electric dehydrators. This yield is consistent. As high as 18,000 bbls. of Smackover fluid has been treated through the dehydrators during a 24-hour period.

Treatment Described

In treating the fluid, it comes direct from the well and goes through the gun barrels. From there it is pumped into the service tanks and is around 30 per cent b.s. It is pumped from the service tanks into the dehydrators. As it leaves the service tanks the fluid is preheated with exhaust steam from the pumps which is piped to a manifold near the service tanks. Before going into the dehydrator tanks the fluid is heated to 125 degrees by heaters on the sides of the dehydration tanks.

Each of the dehydrators works independently and they are automatically controlled to guard against explosions and the pumps and heaters work independently. The electrical control boards are housed inside a small building in front of the plant. The magnetic control switches are operated by a float inside the tank and the float must be elevated to a certain height before current is turned into the tank. In the event trouble cripples the high line service, an auxiliary generator in the control building can be pressed into service to pick up the load and insure practically uninterrupted operation of the treating plant.

Inside of the dehydration tank an iron rod is suspended from the top of the tank. On it and near the top are attached three large insulators, the top one removed but a few inches from the roof of the tank. Below the insulator, the upper electrode is attached to the iron rod. It is a conical shaped iron electrode. Directly beneath it and only a few inches apart is the lower electrode, a metal disc with 1 inch clearance all around the tank. A transformer is attached on the side of the tank and one wire goes through the top of the tank to the upper electrode while the other is grounded in the side of the tank. Alternating current comes into the transformer at 220 volts and is stepped up



Side view of Gulf Co.'s dehydration plant on the Murphy lease in Smackover.

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Jones County Wildcat an Unusual Well

One of the Largest Producers Yet Opened So Far From Other Production. Oil is Black but of High Grade. Lime Formation.

By C. D. Lockwood

ANSON, Tex., Sept. 18.—A 1,000-bbl. oil well, not only holding up steadily at that rate, but increasing slightly several days after it is drilled in, is considered a pretty "sweet" producer in any man's oil field, but when that well is located entirely across a county from the nearest small pumper and more than 50 miles from any production of consequence it takes on some of the aspects of a phenomenon. Such is the Phillips Petroleum's No. 1 Joe Winters, in the southwestern corner of Jones County, Texas. Two 500-bbl. tanks a day were being built late last week by the owners, and that amount of storage was just barely enough to keep ahead of the well, which was flowing by heads every 15 minutes or so. The oil is black in color and tests about 39.6 degrees Baume gravity. A combination 3 and 4-inch line was being laid from the well to the little town of Trent on the Texas & Pacific Railroad, a distance of about 3 miles, and preparations were being made to build a loading rack at that point by the Phillips Petroleum Co., although there was some possibility Friday that the line would be extended to the town of Merkel and the loading rack built at that place. Merkel is situated about 5 miles east of Trent.

4 Feet in Sand

The total depth of this well is 2,514 feet, with the medium hard gray lime from which the big production is being obtained penetrated about 4 feet. There has been considerable discussion as to the total depth of the hole, and the accurate measurement is not definitely known, but those who were present when the well was drilled in on Labor Day (September 6) are convinced that it was deepened only 4 feet from the depth of 2,510 feet, where it had been shut down for a week. The differences of opinion arose from the fact that some cavings were in the hole, and some persons thought at first that it had been drilled into a shale break. Phillips Petroleum Co. men, however, are certain that the bit went through a few feet of cavings when they started deepening operations and that the actual deepening of the well amounted to just 4 feet. This horizon is practically 100 per cent lime. Samples of it completely dissolve in acid.

Disagree as to Formation

According to the best correlations with producing horizons in Shackelford County, this lime occurs either in the top of the Cisco or the base of the Wichita-Albany series. Some think that it is about the equivalent of the Tannehill horizon of central Shackelford County, placing the Cook Ranch sand about 100 feet lower, while others believe that it is even higher in the series than that and believe the Cook sand, if any is present in that part of the country, will be found at depths ranging down to 3,000 feet. All of this, of course, is largely conjecture, although it is fairly evident that the producing lime in the Winters wildcat is at least high up in the Cisco series.

History of District

Much discussion of late has centered around the old Sears well, about 3 miles northeast of the Phillips producer in the north part of Section 35, Block 18, T. & P. Survey. This well was abandoned in July of 1920 at 3,000 feet, after passing up some kind of a showing at 2,465 feet. Drillers who worked for the Security Banking & Investment Co. at the time that concern was drilling this well, and who later made some efforts to go back and test out this showing, claim that it had 19 feet of sand at 2,465-84 feet. The logs of the two wells seem to check up fairly close with the exception of this sand, and it is considered possible that this sand lies below the lime from which the Phillips well is now producing, if there actually was 19 feet of sand in the Sears test.

Some Peculiarities

One of the features of the Phillips wildcat that puzzles some operators is the black color of the oil. Most crude in north Texas that comes from lime is more greenish in color. Another peculiarity is that only about 200,000 feet of gas accompanies the flow. Regardless of the color or the lack of sulphur odor or gas, however, it was a mighty healty looking wildcat at the close of last week when the writer was at the location, and had all the earmarks of making about twice as much production if it were drilled in a little more. Land men and lease buyers were concerned about the producing zone, of course, for obvious reasons. They are afraid of lime production in north Texas, because they can't forget the Ranger days. It might be a one-well field in the lime. Offffsets might very possibly be dry. On the other hand, it will probably cover more territory if the reservoir is lime than if it is sand. The Cisco sands, as a rule, cover a relatively small spot. Samples of this lime, however, seem to be highly porous.

Several Interesting Angles

This discovery in Jones County is highly interesting from several angles. It has undoubtedly started a wildcatting campaign that will result in numerous tests covering a large part of four counties which have in the past been practically condemned by the north Texas geologists and lease buyers. One geologist denied that the area had been "condemned." To which a lease man retorted, "Well, maybe you didn't condemn it, but at least you wouldn't buy anything out there." It has cost several of these men and their companies $100 an acre to get in that district since Labor Day. One owner of a block located about 12 to 15 miles south of the well, in Taylor County, was asking $2.50 an acre and a well last Friday. Nobody at that time wanted to pay such a price, but many seemed convinced that the offer would be taken up sooner or later. A cut in the price of Mid-Continent crude, of course, may retard the activity in this as well as other regions, but if the price holds up a number of tests are scheduled to start up soon.

One of the closest tests to the Phillips well is that of Gibson & Johnson in the center of the southeast quarter of Section 28, De Witt County school land. The cellar was being dug and rig materials were moving in late last week. This test is located just a mile southeast of the old Sears well and about 3 miles northeast of Phillips Petroleum Co.'s No. 1 Joe Winters. It is supposed to be situated approximately on the axis of the nose on which the latter well is producing. Gibson & Johnson had 3,900 acres in their original block, most of it in the De Witt County school land, and some in Block 18 of the T. & P. Survey, and have sold spreads to the Simms Oil Co. and others. The Wildman Petroleum Co. took a block near the center of the south line of the county, but no drilling obligation is attached to it. About 7 miles from the south line of the county and about midway between the east and west lines, Hickey & Gillette are down more than 1,200 feet in their No. 1 S. W. King, which is located 250 feet north and 2,250 feet west of the SE cor. of the Manuel Bueno Survey No. 197. This is in a northeasterly direction about 15 miles from the Phillips discovery.

Then, in the southeastern corner of Jones County, is the Marland Oil Co.'s No. 1 S. R. Cox, 660 feet south and east of the NW cor. of Section 72, Block 14, which was responsible for the Marland Oil Co. having such a beautiful spread around the new find.

This Jones County well is said to be the second rank wildcat producer ever completed by the Phillips Petroleum Co., the other one having been drilled in Kansas, north of Elbing, and this block in Jones County is one of the very few wildcat blocks in which the company has ever sold or traded any acreage. The discovery well also has the distinction of being one of the biggest wildcats ever drilled in north Texas that far from production.

Traded Wildcat Acreage

Considering these facts, it is interesting to note that the Phillips people traded a spread of 546 acres to the Midwest Exploration Co., including a diagonal offset 80 acres, for a spread around a rank wildcat that the Midwest was drilling in

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Eastern Refiners Discuss Problems

Annual Meeting of National Petroleum Association Largely Devoted to Discussion of Practical Matters. Keeney Re-elected President.

By L. M. Fanning
New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York City

ATLANTIC CITY, N. J., Sept. 18.—The annual meeting of the National Petroleum Association held here September 15 to 17, inclusive, developed not only some interesting discussion on the work being done by the members to increase refining efficiency but on economic and legislative problems affecting the industry.

The reports of the departments of the association brought out the fact that in more than one respect the organization is taking active steps to bring about workable co-operation among members, some of these steps being notably progressive. In this type of work is that of the training of fire marshals in plants.

O. P. Keeney, Tide Water Oil Co., New York, re-elected for a third term as president of the National Petroleum Association.

The National Petroleum Association, through the Fire Marshals' Association, of which Houston Dunn is managing director, reported a plan to make this work more effective.

H. H. Green, of the Kendall Refining Co., and A. W. Scott, of the Empire Oil Works, were elected trustees of the association, succeeding L. P. Litzinger, of the Butler County Oil Refining Co., and A. C. Woodman, of the Acewood Oil Co.

Keeney Re-Elected

O. P. Keeney, of the Tide Water Oil Co., was re-elected president of the association. P. S. Tarbox, Independent Refining Co., and H. A. Logan, United Refining Co., were elected first and second vice presidents respectively, succeeding Sheldon Clark and L. P. Litzinger. Judge C. D. Chamberlin was named advisory counsel and Fayette B. Dow, general counsel. Other re-elections were Willis Crane, traffic attorney; Herbert G. Eaton, recording secretary, and G. B. Hunter, treasurer.

The Department of Manufacture, of which B. B. Stroud, of the McKean County Refining Co., is chairman, reported results of the work under the plan for the co-operative purchasing of engineering service, and H. A. Ross, the association's engineer, discussed the problems encountered.

One of the most interesting developments reported on was that concerning the collection of trade, statistics and the organization of marketing groups. E. M. Lyons, vice president of the Tiona Refining Co., and trustee in charge of the association's Department of Trade and Commerce, pointing out that the whole situation had been clarified by the decision of the Supreme Court in the Maple Flooring Manufacturers Association case, said:

"We asked Mr. Dow to advise us as to the law with respect to gathering and issuance of statistics and trade information which he did, making it clear that there must be no agreement or concerted action or attempt to agree, or to take concerted action with respect to prices or production. Prices of actual sales or stocks on hand can be reported. The association as a whole has never gathered information of this character and no desire was expressed that it should do so. However, it was felt that the organization of local marketing groups, following the practice which had been established with respect to manufacture, traffic and standards and tests, might be helpful in gathering correct information as to market conditions and in the elimination of trade practices which good business conduct would condemn."

Fayette B. Dow, counsel for the association, referring to better economic conditions in the industry, said the advances in gasoline prices in 1926 (now subject of an investigation by the Federal Trade Commission) amounted to a recovery no greater than the decline of those prices in 1925. Mr. Dow's report was carried in last week's issue of The Oil and Gas Journal, an interesting feature being Mr. Dow's advice to members that they answer the Federal Trade Commission's questionnaires. Detailed reference was made by Mr. Dow and by Willis Crane, traffic attorney, to traffic cases before the Interstate Commerce Commission and particularly to the general investigation of rates on petroleum and its products in territory east of the Mississippi River. The following I. C. C. notice was made public:

"On August 5, 1926, the commission issued a notice directing attention to the fact that the above-entitled proceeding had been set for hearing at St. Louis, Mo., on October 4, 1926, and requesting any interested parties who desired to introduce their evidence at points other than St. Louis, to advise me promptly so that subsequent hearings could be arranged. Requests for other hearings having been received, the proceeding is now reassigned for hearing before Attorney-Examiner Keeler at 10 A. M., as follows:

"Hotel Jefferson, St. Louis, Mo., October 4, 1926.

"Hotel St. Charles, New Orleans, La., October 11, 1926.

"Hotel Texas, Fort Worth, Tex., October 15, 1926.

"Hotel Mayo, Tulsa, Okla., October 22, 1926.

"Hotel Biltmore, Atlanta, Ga., November 17, 1926.

"Chamber of Commerce Rooms, Pittsburgh, Pa., November 29, 1926.

"Merchants Association Rooms, New York City, December 6, 1926.

"In the announcement of August 5, the suggestion was made that time and expense could be saved if interested parties would agree to an exchange of exhibits prior to the hearings. Responses received indicate considerable lack of unanimity among the parties relative to compliance with this suggestion and in view thereof it has been decided not to require an exchange of exhibits prior to the hearings.

"At the above-scheduled hearings, complainants and other interested shipping interests will introduce their evidence, after which an adjournment will be taken for approximately 30 days. Subsequent hearings will then be held for the completion of the cross-examination of witnesses who testified at the initial series of hearings, and the introduction of evidence by the carriers, and rebuttal evidence by complainants and other shipping interests. In order to facilitate the cross-examination of the carriers' witnesses, they will be expected to distribute their exhibits to all parties of record at least 10 days in advance of the second series of hearings."

Attacks Litigation

Sheldon Clark, vice president of the Sinclair Refining Co., and trustee in charge of the Department of Legislation and Litigation, made a vigorous attack against proposed legislation directed directly against the oil industry in connection with pollution of waters.

"I do not wish to be misunderstood in this matter," he said. "The oil industry does not desire that the rivers, harbors or coastal waters of this country should be polluted by oil or any other substance. Anyone who knows the conditions which prevailed years ago at oil refineries and compares them with the conditions that prevail today, knows that remarkable progress has been made in the recovery of oil which was formerly wasted. I do not believe that any industry has a better record of progress in that respect than the oil industry. Conditions can still be improved no doubt. They will be certainly improved, for oil is too valuable to waste. I am in entire sympathy with the desire to prevent our rivers from becoming the open sewers which some of them already are. No proposed legislation intended to prevent pollution and which, by application to all sources of pollution, may reasonably be expected to prevent it, will find serious opposition in the oil industry, but legislation directed against the oil industry alone and which, if enacted, would still leave our waters polluted cannot possibly be justified. The oil industry should oppose such discriminatory legislation with all the courage and intelligence at its command."

P. S. Tarbox, Independent Refining Co., Oil City, Pa., elected first vice president, National Petroleum Association.

Commissioner W. E. Humphrey, member of the Federal Trade Commission, gave an address on "The New Policies of the Federal Trade Commission." Chester Naramore, of the Sinclair Consolidated Oil Corp., spoke on "Oil Operations in Foreign Fields."

Modify Pour Test

Fred G. Clark, of the Fred G. Clark Co., trustee in charge of the Department of Standards and Tests, took up the matter of the proposed A. S. T. M. pour test method which has been protested as discriminatory against Pennsylvania oils, making public the following report by J. B. Rather and H. M. Anderson, covering a proposed modification of the A. S. T. M. pour test applicable to those oils which give erratic results by the present method:

"It is a well-known fact that the present A. S. T. M. Pour Test Method as described in the tentative method of test for cloud and pour points of petroleum products (D-97—23-T) gives erratic results on certain types of oils and it has been proposed to secure uniformity by preheating the sample to some arbitrarily selected temperature. This is very objectionable because the pour test obtained on the preheated sample very frequently depends upon the degree of preheating, and because some oils under this treatment give results which bear no relation whatever to the condition the oil will ultimately attain when stored at ordinary atmospheric temperatures. The purpose of our work was to secure uniformity in testing, regardless of any previous heat treatment, or storage conditions, of the sample, and at the same time to obtain results which would be related to the actual condition the oil reaches in storage.

Results of Experiments

"Eight oils were selected for this work, most of them were oils which gave abnormal results by varying heat treatments previous to testing. In our preliminary experiments we found that in many cases repetition of the A. S. T. M. procedure on the same sample one or more times caused the oil to return to its final equilibrium with regard to pour point, regardless of previous heat treatment, when the equilibrium was taken to be the condition the oil attained in laboratory storage. It was found, however, that heat treatment of certain oils produced a semi-permanent elevation of pour point not rectified by this procedure, and that heat treatment of certain others produced a semi-permanent lowering of the pour point not rectified by the method of test.

"The above experiments lead to a study of the influence of pre-heating over a range from 90 to 400 degrees Fahrenheit on the results secured by the A. S. T. M. method. This study, results of which are shown in Table 1, Figure 1, indicated clearly that there is a definite 'high point' with every oil, at which preheating temperature the maximum possible pour point would be obtained.

"This 'high point' was at about 115 degrees Fahrenheit with all of the oils tested.

"On the basis of the above work the following procedure was developed:

"Put the oil in the cold test jar, insert thermometer, and cool in the A. S. T. M. cold test apparatus until the oil ceases to flow. Remove and heat, without stirring, to a temperature of 115 degrees Fahrenheit in a bath maintained at about 118 degrees Fahrenheit. Cool to 90 degrees Fahrenheit in air and make

(Continued on Page 129)

CONVENTION ADDRESSES

The annual address of O. P. Keeney, president of the National Petroleum Association and that of Fayette B. Dow, counsel of the association were published in the September 16 issue of The Oil and Gas Journal.

Addresses published in this issue are as follows:

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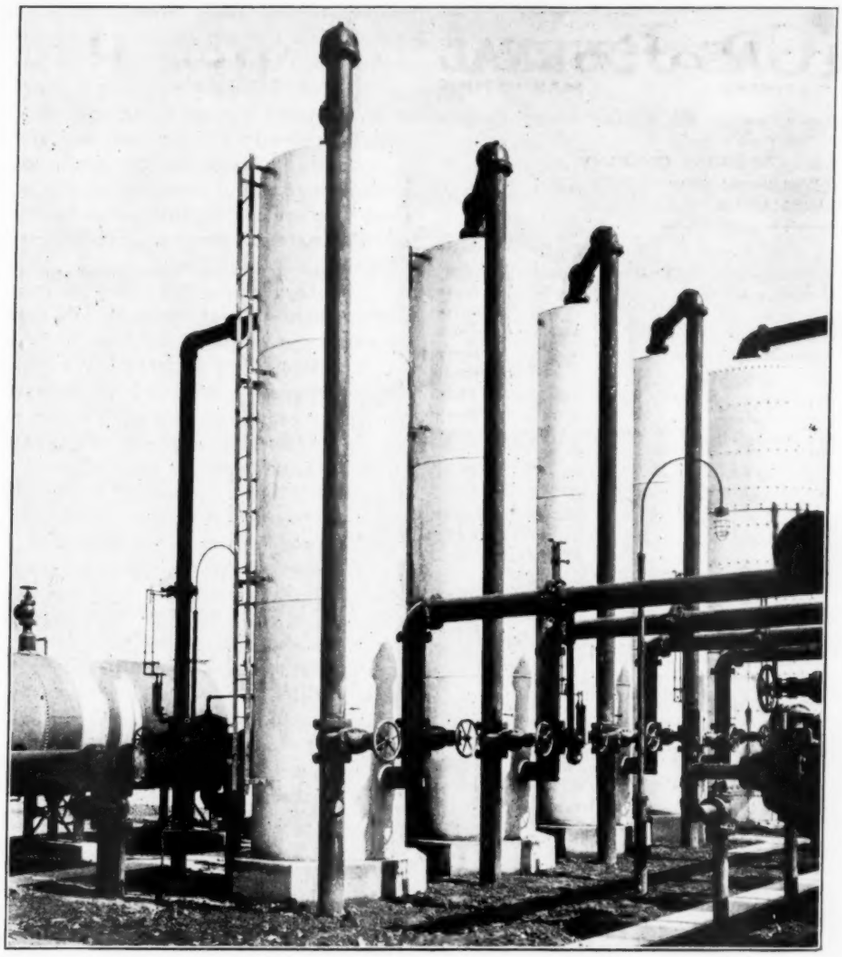

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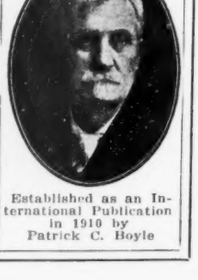

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PASSING OF THE PIONEERS

The oil industry has lost four nationally prominent men in recent weeks, two whose activities dated back to the days of Pithole and Petroleum Center, and two who played a leading part in later developments.

Calvin N. Payne, who passed away in Erie, Pa., at 81, began his career in oildom with his foot in a spring pole strap and was later one of the pioneers in drilling a 1,000-foot well, then a marvelous feat.

Thomas H. Wheeler, aged 82, to whom Chairman George H. Jones and President W. C. Teagle paid merited tribute, entered the industry in the cooperage trade and did his work so well as to become purchasing agent for the Standard Oil Co.

Like Mr. Payne, Martin B. Daly was chiefly active in the development of the natural gas branch, as has been W. W. Splane, whose death is last recorded. Mr. Payne was chosen to build up and manage the natural gas interests of the Standard in 1885. Mr. Daly, president and general manager of the East Ohio Gas Co., in early days superintended the construction of the natural gas line from McKean County, Pennsylvania, to Buffalo, N. Y., 90 miles, an undertaking seriously questioned as a possibility at the time. To Mr. Daly also is attributed the first use of the now universal sale of gas by meter.

Mr. Splane, long associated, like Mr. Payne, with the National Transit Co. and various pipelines, became largely interested in the natural gas industry, particularly in Oklahoma.

Each of these men, in his day and sphere, contributed invaluable service to the building up of the petroleum industry. They were leaders in that sturdy band of pioneers whose labors paved the way for the universal use of oil and all the progress following.

AN EXAMPLE FOR OKLAHOMA

His firm stand for economy in public expenditures and a corresponding reduction in taxes has been the main factor in the popularity of President Coolidge's administration.

When Secretary Mellon found a surplus in the national treasury it was taken as a reason for reducing taxes, not for extravagance.

The result was taxes that were so high they drove money into non-taxable and non-productive investments were cut and the capital returning to productive enterprises has actually so increased business and employment that there has still been a surplus.

Instead of that money being tied up in non-productive securities or an immense surplus being squandered by Congress, it has been put into industry and business and everybody has been the gainer.

There is a lesson for the people of Oklahoma in this example at Washington and a lesson for the people of all states who may think they are helping themselves by piling taxes on the oil industry.

The state platforms of both leading parties in Oklahoma recognize this.

The Republicans said: "We believe enforcement of present laws will produce sufficient revenue. We are opposed to increasing taxes by enactment of additional laws."

The Democrats declared: "We believe that if there are inequities in the present revenue laws their removal should be approached through a general survey of the taxing system as a whole and not by the enactment of new tax raising measures at this time."

Oklahoma is not in need of more tax revenue. It actually has a surplus, chiefly because of the receipts from the tax levied on gross oil production paid by the oil industry.

This tax has been increased from one-half per cent in 1910 to 3 per cent—500 per cent. It has been increased 400 per cent since 1917. Oklahoma, as an oil state, has shown no favors to the oil industry which has been its chief source of revenue.

Where other property has been taxed less than 30 mills on an average valuation of but 50 per cent, the tax on oil production has been 30 mills on a full 100 per cent valuation.

And now they are talking about equalization of taxes. The idea of equalization is, not as might be supposed, to reduce the oil rate to the general level, but to increase the rate on oil still more.

This means that the oil industry of the State must give up more millions in taxes that might better be employed in extending the development of Oklahoma oil properties, with resultant prosperity.

The issue before the voters of the State when State Question 138, Initiative Petition No. 89, is submitted to referendum in November will be simply whether that many millions are to be turned over to the politicians to waste or left with the oil industry to increase the development of the natural wealth of Oklahoma.

The experience of other states has shown that discriminatory taxes on industry and business keep away the money of investors from outside the state. Those with money to invest fight shy of states where they are subject to excessive taxation.

The adoption of this scheme to increase oil taxation will deprive the State of the investment of that money in development by the oil companies who pay the tax and also will scare away the money of outside investors who would assist in that development.

It is not as though this production tax was the only tax the oil industry pays. It pays the same taxes as anyone else on its real property, city and rural, pipelines, office buildings, service stations, material stocks, stored oil and other items.

Under the existing gross production tax, although it is much higher than the tax levied on other taxpayers, oil men can at least know definitely what their tax will be and plan accordingly.

Under the proposed plan of levying a tax equal to the average ad valorem tax throughout the State they will not know what the rate will be until all the various taxes are assembled and averaged. Contests over any tax will delay it still further. The question is asked where the State will get the cash it needs in the meantime. Borrowing will further increase the tax levy for the taxpayers.

There is yet another possibility that may give the voters cause for consideration. The proposal speaks of equalization. Litigation over the new tax may lead the courts to rule that equalization means what it says and if the oil companies are to pay an ad valorem tax on a 100 per cent valuation of the oil produced, equity may require that all other taxable property be valued likewise.

How will the farmers and real estate owners who may be deluded by this scheme to tax the oil industry enjoy that outcome when they have been paying taxes on only a 50 per cent valuation?

What industry and business and the country at large needs is not more taxation but less, as the results of the Coolidge-Mellon policy nationally have proved in the present prosperity.

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Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry. Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

ACTIVATED CHARCOAL

Is it possible to select a good grade of hard wood charcoal and by thoroughly drying it prepare a product which will serve for the extraction of gasoline? How is the special charcoal which is used in the charcoal plants made?—R. M. K.

The charcoal which is used for the extraction of gasoline from natural gas is a product of the recent war. When it became necessary to obtain some substance which would effectively remove the poisonous gases from the air which the men were breathing, a large number of different kinds of charcoal were tested. It was found that the charcoal made from nuts was superior to any other kind and that cocoanuts could be obtained in large enough quantities for furnishing a sufficient supply.

Fine grain or porosity is necessary and the charcoal must be hard to withstand handling without producing large quantities of powder. Charcoal made from hard wood has comparatively large pores and does not withstand handling so well as that made from nuts. The adsorption value of mahogany charcoal is 32 against 61 to 72 for cocoanut charcoal.

The description of the process for making activated charcoal, by Fries and West in Chemical Warfare, or by Burrell in Recovery of Gasoline from Natural Gas, page 289, is too long to reproduce here. A brief outline is as follows:

The first operation is a process of destructive distillation at low temperatures, observing care to charge the material to the retorts in thin layers so that excessive contact of the hydrocarbon vapors and the hot charcoal may be prevented. The second operation involves the removal of the hydrocarbons by combined processes of oxidation and distillation, whereby the heavy hydrocarbons, high boiling points, are broken down into more volatile substances and removed at lower temperatures. Cracking of the hydrocarbons at high temperatures with the consequent formation of inactive charcoal is to be avoided. An important feature of the process is proper oxidation of the primary carbon itself. The outer ends of the capillary pores and fissures must be enlarged so that readier access be provided to the inner portions of the charcoal, but this must not proceed beyond a certain point or the cavities will be so enlarged that there will be a drop in volume activity. The activating temperature varies between 350 and 450 with air and between 800 and 1,000 Centigrade with steam.

COMPOUNDED LUBRICATING OIL

What are the principal objections and what harmful result might take place in a motor in which a lubricating oil is used that has been compounded with one or more animal fats?—H. J. S.

The addition of animal oils and fats to a mineral lubricating oil may be very desirable and serve a useful purpose for certain kinds of work. There need be no harmful result.

The presence of a small quantity of animal fat may be a material aid to the body lubricant. The lubricating film of mineral oil is broken down in the presence of small quantities, often from ½ to 2 per cent, of water. However, if some substance is added which has the property of producing an emulsion in the presence of water, then the emulsified mass acts as a carrier for the oil and therefore lubrication may be maintained. Otherwise the broken film would permit surface to surface contact with the consequent damage.

The animal oils and fats contain more carbon than the mineral oils, so if the temperatures should be high enough to cause decomposition, there would be more carbon deposited from a given quantity of animal oil than there would be from a corresponding quantity of mineral oil.

Animal fats contain organic acids, chiefly oleic, which increase in quantity with the age of the fat and the degree of purity. The more expensive, those which have been carefully and completely refined, may be quite free from these acids, while the cheaper grades frequently contain large quantities. In the presence of water, these acids cause emulsions and deposits, especially in the presence of heat. This might prove to be a major difficulty if a compounded oil were used in a motor. There is the additional possibility of corrosion being induced under these conditions by the fatty acids which may be present in the animal oil.

WEIGHT OF GAS

Can you tell us how much gas weighs 1,000,000 feet and how much sulphur by weight we have in 4,000,000 feet when the hydrogen sulphide content is 10 per cent?—L. G. T.

Either the specific gravity of the gas or the analysis would have to be known in order to arrive at the weight of the gas. The quantity of hydrogen sulphide sounds exceptionally high, but if it is correct you may make the calculation on the basis of the molecular weight of hydrogen sulphide, which is 34. The atomic weight of sulphur is 32 so then 32/34 of the weight of the hydrogen sulphide is sulphur.

Air weighs 0.080728 of a pound to the cubic foot and as the gravity of gas is based on air as unity, you may calculate the weight of the gas from the specific gravity determination. Likewise, the specific gravity of hydrogen sulphide is 1.1906 and the weight of 1 cubic foot is 0.0909 pound. Another way to make calculations of this kind is derived from the fact that when the molecular weight of a gas is expressed in pounds the volume will be 359 cubic feet under standard conditions of pressure and temperature. (See this department August 12, 1926.)

INTERNAL COMBUSTION ENGINE ORIGIN

By whom was the first internal combustion engine invented?—E. R. C.

The first internal combustion engine appears to have been designed about 1680 by Huyghens who used gun powder as a source of the power. He described an engine with a piston working in a cylinder which had an open end. The piston was forced upward as the result of the explosion. Valves were provided for the escape of some of the gases produced by the explosion while some which remained in the cylinder and through the process of cooling produced a vacuum. The piston was then pushed downward through the action of the atmospheric pressure.

The gas and air type engine of the present day has been developed along lines originally laid down by Lenoir in 1860 and Otto in 1866.

WAX REMOVAL

When cold settling fails to remove cracked wax crystals from a bright stock which was contacted for color in the beginning, is there any use to try the centrifuge process?—D. L. W.

The efficient removal of wax from an oil must depend upon the character of the wax, that is whether it is amorphous or crystalline, the temperature to which the oil-wax mixture is cooled and the length of time it is permitted to stand for settling. The centrifugal process shortens the time and produces a better separation. If the stock is the same and the same temperature is applied, the centrifugal process yields a better product than the cold settling method. In addition to the removal of the wax which is in the crystalline form it will separate appreciable quantities of amorphous wax so that a lower pour test stock should be obtained.

It is presumed that you have used a naphtha of the correct gravity and in the proper proportion with the oil.

CONVERSION OF GAS INTO LIQUID FUEL

If the permanent gases from coal and those found in natural gas were converted to the liquid form, would it be possible to use such a liquid for motor fuel?—D. R. D.

Great things have developed from the liquefaction of air; one of which has been the bottle for maintaining the temperature of liquids and other substances far beyond anything that might have been expected a comparatively few years ago. A favorite idea of a number of inventors has been one proposing to heat coal at the mine, make power either in the form of steam or electricity, and transfer gas to great distances, in addition to the production of oil and other substances. Recently serious attempts have been made, with some degree of success, to change coal into gas and then into liquids of the gasoline and alcohol type. It is reported that wood alcohol has been made from methane and carbon monoxide, both of which may be formed in coal gas. Other alcohols have been made from natural gas and from refinery gases. The alcohols, however, are not suitable fuels for the present motor.

A recent announcement of the American Chemical Society states that methane has been converted into a liquid which has a heating or power value approaching that of benzol.

It seems then that some form of conversion of the gaseous hydrocarbons may be accomplished and that there will be furnished thereby a combustible liquid suitable for use in a motor.

VISCOUS AND NON-VISCOUS LUBRICATING OILS

What is the meaning of the terms viscous and non-viscous as applied to lubricating oils? I see no reason for the use of the word non-viscous. because these oils are used for lubricating.—C. M. L.

A special meaning for these words seems to have its origin in the process of manufacture. The primary cut from the crude, commonly known as wax distillate, contains wax in addition to the lubricating oil which is removed by cooling and filtering. After the removal of the wax the lubricating oil fraction is returned to a still to be reduced for the purpose of increasing the viscosity. The overhead products from this distillation contain the light or so-called non-viscous neutrals, while the bottoms, or the residue remaining in the still at the end of the distillation, are known as the heavy or viscous oils.

The non-viscous oils have a low viscosity, which may vary some according to the crude and the manner of processing, usually in the neighborhood of 100 at 100 F. Saybolt. While overhead oils are made having a higher viscosity, the term non-viscous was first applied so as to differentiate between the residue and the overhead.

With some stocks it is not necessary to treat the light oils with acid in order to obtain a good color, hence the addition of the word neutral. The freedom from acid and wax has in some cases led to the classification of these oils as stainless neutrals, but this is not warranted except in a relative sense.

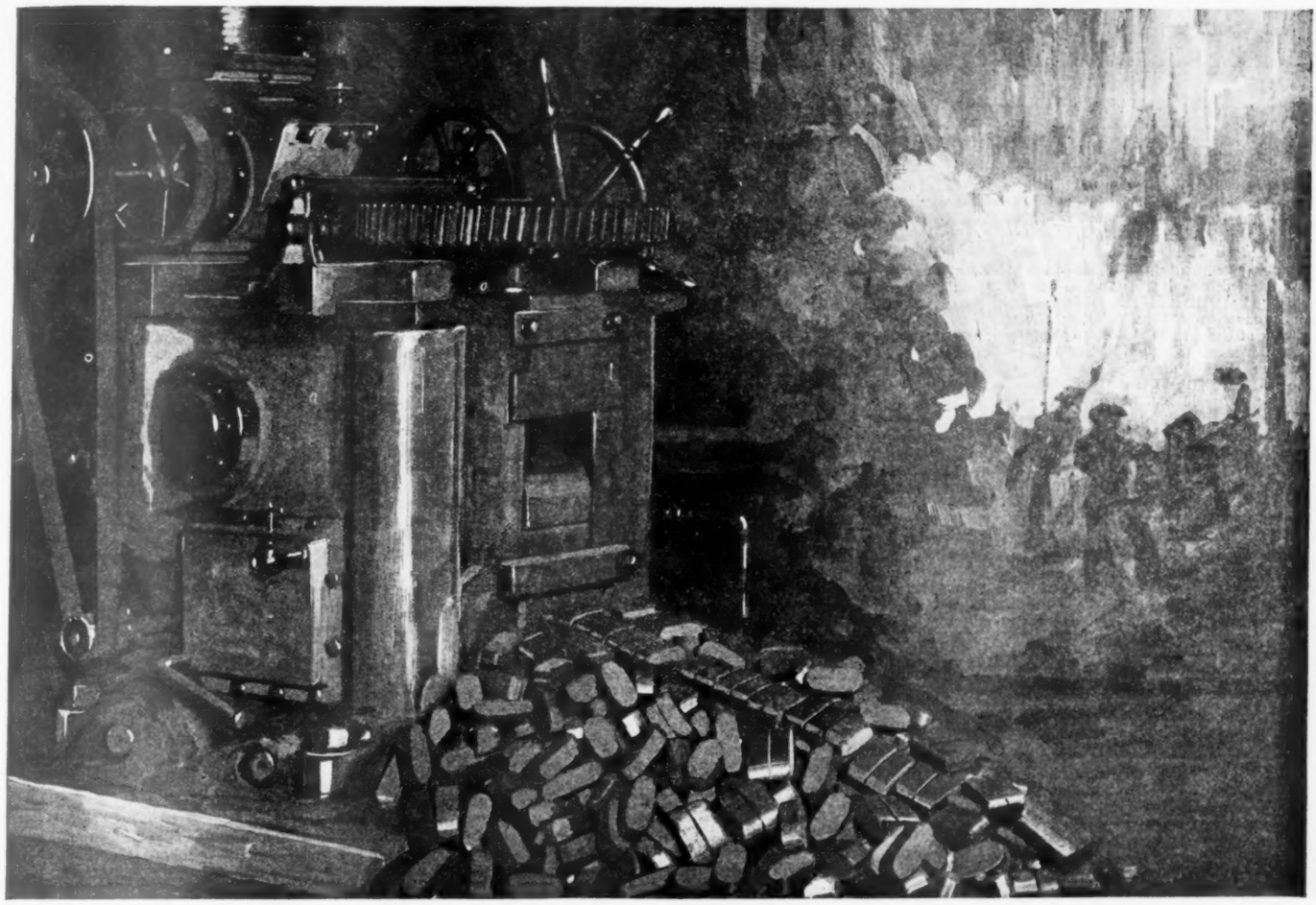
RUBBER FROM PETROLEUM

Is there any foundation for the recent story that rubber has been made from petroleum?—L. Y. A.

We have not seen any authentic statement showing that real rubber has been produced from petroleum. A hard substance which may be used in the place of rubber for some purposes has been made, but we do not think it would make a very good golf ball, or do to slip around the old letters.

With the great increase in the demand for rubber and the consequent advance in the price, there have been renewed efforts to make it by synthetic methods. Petroleum offers a cheap raw material from which, according to its chemical composition, it may be possible to make a product which will compare with the real thing. We have in the lower fractions, such as wax tailings, a substance which has some of the properties of rubber. It is a fact that during the war some kind of synthetic rubber was made and used for batter jars.

Certain alcohols which are now being made from petroleum appear to be a good starting point for the building up of a rubber molecule, and so a process may be developed with some of the secondary products from petroleum. A parent substance must first be made, then means found for the proper conversion. The summy substance we sometimes find in gasoline may belong to the proper class and, if that should prove to be true, we might have cracking stills designed for the purpose of converting the objectionable heavy ends, or whatever portion contains the gum, into rubber.



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Fernholtz Briquetting Process

Extension and New Deep Sands Found

Panhandle Area Spreads in Carson County. Deeper Zone in Huntington Beach and at Spindletop. Seminole Disappoints

The producing area in Carson County, Texas Panhandle, has been extended 7 miles by the Roxana Petroleum Co.'s No. 1 Bryan which made 1,200 bbls. in the first 24 hours and at last report was making when opened up 5 bbls. per hour. The oil tested 38.5 degrees and will pour at 25. The well is 11 miles from the main production and in the lime along the flank of the granite ridge. Panhandle production is up to 120,815 bbls.

In the Hurdle district, Upton Crane Counties, Texas, the Dixie Oil Co.'s No. 7 Burleson flowed 616 bbls. of oil and 150 bbls. of water the first five hours: now flowing 60 bbls. hourly, 25 per cent water. In the old Sunshine Pool in Wichita County, the largest producer in 10 years, just completed, is estimated at 1,250 bbls. The Amerada Petroleum Corp. got a well in Brown County making 14 bbls. an hour.

In the Seminole Pool in Oklahoma the discovery well made 8,012 bbls. on its sixtieth day. The Gypsy Oil Co.'s No. 1 Carter, which started the Wilcox work in that section, is dropping daily. The Gypsy's No. 2 Fixico has found the Hunton lime 106 feet lower in a quarter of a mile than the discovery well, suggesting a fault exists and causing some misgivings about the limits of the pool.

In the northwest extension of the Tonkawa deep sand small wells are being found where gushers were expected and there is keen disappointment.

The Walber well in the Lawson area, Arkansas, after blowing in making 5,000,000 feet of gas and 8,000 bbls. of fluid, 95 per cent salt water and 5 per cent oil, for an hour, causing much excitement, went dead. The Phillips Petroleum Co., which had taken over the well, has ordered an air jammer. The Haynesville Field's possibilities as a deep producer continue to interest Louisiana operators.

The finding of a hitherto undeveloped deep zone by the Wilshire company in the southwest extension of Huntington Beach was the feature of the news from California. It made 500 bbls. a day. Some fast drilling will be staged in the next 60 days. There are 22 derricks standing besides the 51 wells under way.

The Union Oil Co. has finished No. 2 Barrett at Mount Poso, Calif., the second well in that field, pumping 300 bbls. from 2,053 feet.

Another deep sand was found at Spindletop in the completion at 4,244 feet of the Gulf company's No. 4 Weed, flowing 4,000 bbls. through ¾-inch chokers. The oil is 27 gravity. An Orange Pool well flowed 2,200 bbls. with drill stem in the hole.

OKLAHOMA

The Seminole Pool in Seminole County produced 22,029 bbls. from 26 wells for the 24 hours ending Tuesday morning of this week.

Mid-Continent Petroleum Corp. has a good Hunton Lime well in No. 2 Tayoche, NW cor. SE SW, Section 24-9-6, Seminole County. Sand was 3,906 3,940 feet, and the well made 700 bbls. the first 12 hours.

Gypsy Oil Co.'s No. 1 Carter, the Wilcox sand well, SE cor. NE NW, Section 24 9-6, Seminole County, made 1,942 bbls., cut 2½ per cent, on Monday of this week.

MEXICO

NEW YORK, Sept. 21. — Compania Maritima has completed No. 16, Federal Zone Ojital, producing 3,500 bbls. initial from 1,630 feet. Rich-Mex has completed No. 10 in Lot 26 Altamira, flowing 5,000 bbls. initial from 2,170 feet. It is on the bank of Tamesi River, 10 kilometers from nearest production, which is Gulf Oil's well No. 30, Altamira, to the north and 12 kilometers from Mexican Petroleum Corp.'s Silva wells to south. Discovery indicates a new pool and should mean great activity in Chapacao south and along the Tamesi River.

NORTH TEXAS AND PANHANDLE

FORT WORTH, Tex., Sept. 21.—Dixie Oil Co.'s No. 7 Burleson, in Upton County, flowed 616 bbls. oil and 150 bbls. water in the first 5 hours starting at 2 A. M., Monday. It is now flowing 60 bbls. hourly, 25 per cent water, through 1-inch choke; elevation 2,666 feet; pay 2,315 feet.

Phillips Petroleum Co.'s No. 1 Winters, in Jones County, flowed 970 bbls. in 24 hours, ending noon Monday. Cosden's No. 1-A Connell topped the lime at 3,235 feet; elevation 2,847 feet, making it minus 388 feet or 182 feet higher than Cosden's No. 1-B Connell, and 100 feet higher than Zwiefel's No. 1 Johnson, also 65 feet lower than Church and Field's No. 1. Wentz's No. 1 Blanton, near Leuders, in Jones County, has a 3-bbl. showing at 1,623-25 feet.

Throckmorton County Pool has a new deep pay in Red Bank Oil Co.'s No. 1 Elliott, Section 974, T. E. & L. Survey, flowing at the rate of 125 bbls. daily from brown lime at 4,129-33 feet. They are moving back boiler and will run 5-inch. The Texas Company's No. 8 J. H. Turbeville-C, Section 172, Robert Carson Survey, Archer County, swabbed 1,020 bbls. from 1,494-1,522 feet. No. 7-C swabbed 1,130 bbls. from sand at 1,498-1,526 feet. Petroleum Producers Co.'s No. 1 J. H. Turbeville, Section 171, swabbed 50 bbls. hourly from 1,489-1,522 feet.

Roxana's No. 1 Bryan, in Carson County, Section 92, Block 4, flowed only 5 bbls. an hour when opened up after being shut in but will be cleaned out.

GULF COAST

HOUSTON, Tex., Sept. 21.—Gulf Production No. 2 Jack-Duff at Spindletop is flowing 1,000 bb's. at 3,400 feet. The Sun Co. deepened No. 1 McLean to 3,313 feet, and it is now flowing 1,200 bbls. The Vacuum Oil Co. and Gulf Production Co.'s No. 8 Miller at Lockport, La., flowed wild for 12 hours and then sanded. It put out about 3,500 bbls. of oil from sand topped at 4,400 feet and drilled in 12 feet. The oil is 24 gravity.

Spindletop production Monday was given as 95,000 bbls. for the previous 24 hours.

CALIFORNIA

LOS ANGELES, Calif., Sept. 21.—The Union Oil Co. has just finished No. 2 Sarrett in Mount Poso Field, pumping 300 bbls. from 2,053 feet. This is the second well in this field and makes the Union's acreage look like the cream of the district. Other companies are following Union's reduction in gasoline spasmodically.

WINTER ADVOCATES NO ROYALTIES FROM WELLS ON GOVERNMENT LANDS

By Frank B. Taylor

DENVER, Colo., Sept. 21.—The four-day joint convention of the western division of the American Mining Congress, the American Institute of Mining and Metallurgical Engineers, the American Association of Petroleum Geologists and the American Silver Producers Association was called to order in the New Cosmopolitan Hotel at 1 o'clock Monday afternoon. J. J. McDonald was in the chair. The first speaker was Dr. Hubert Work, Secretary of the Interior.

Doctor Work reviewed the history of land laws and the public lands of the nation. He admitted changes were needed badly in administering public lands. He said the homesteader was especially in a bad state and he has advised war veterans not to attempt to take up homesteads under the present regulations. The Government does not receive any great income from public lands but has had to reimburse departments for funds expended. Doctor Work expressed himself as strongly in favor of Government direction of public lands and he did not consider State administration to be equal to Federal direction of policies.

Commissioner William Spry followed Doctor Work and after outlining the history of the public domain made the statement that states have frittered away the lands under their control, and this is against the present endeavor of western states to become their own custodians of the lands within their boundaries.

Congressman Charles Winter of Wyoming carried the convention with him. He cited authorities to show the public land administration on the part of the Federal Government was not intended to furnish income. The Federal Government, he said, was simply to act as trustee for the states. He received much applause when he advocated no royalties from wells on Government lands and that the area permitted the homesteader be enlarged to double the present area of 640 acres.

Governor Dern of Utah followed Winter and endorsed Winter's advocacy of state rights and cited abuses which the states had to put up with under the present system.

The geologists had their first inning today when the afternoon program was opened to them and addresses by Glenn C. Clark on "The Geology of Western Kansas." J. V. Howell on "The Amarillo District" and by J. W. Beede on "The Geology of Southwestern Kansas" were on the program, followed by a general discussion.

TEAGLE PAYS VISIT TO TURNER VALLEY FIELD

WINNIPEG, Man., Sept. 18—W. C. Teagle, president of the Standard Oil Co of New Jersey. A. M. McQueen, vice president, and Dr. O. B. Hopkins, chief geologist of Imperial Oil, Ltd., a subsidiary of the New Jersey company, have completed a tour of the Alberta oil fields. Doctor Hopkins expressed his opinion that it is unlikely the Turner Valley Field would produce a heavier oil than the naphtha at present coming from Royalite No. 4 and McLeod No. 2 well, while Mr. McQueen said that if production increased, wider and more difficult marketing problems would arise.

"I do not think there is much chance of developing in Turner Valley a heavy type of crude oil," Doctor Hopkins said. "We might get a little heavier type of naphtha lower down on the structure, which is indicated by McLeod No. 2 well. McLeod naphtha runs about 65 gravity compared with 73 gravity in Royalite No. 4. It is possible by going lower on the dip than McLeod well a little heavier type of naphtha may be found, but I doubt if heavy crude will be found."

BROOKS ENGINEERING CO.

The Brooks Engineering Co. wishes to call the attention of the readers of the Journal to an error inadvertently made in their advertisement of September 2. In the list of equipment mentioned appeared "Floating Roof Tanks." The company manufactures equipment for floating roof tanks, but does not produce tanks.

GALLAGHER SUCCEEDS DALY

R. W. Gallagher, vice president, has been chosen president of the East Ohio Gas Co. in place of the late M. B. Daly. Mr. Gallagher is president of the Natural Gas Association of America.

SHREVEPORT MARKET STEADIER AT WEEK END

SHREVEPORT, La., Sept. 20.—Practically every product in the Shreveport refined market was easier during the past structure was lowered fractionally. Gasweek and U. S. Motor gasoline price oline was sluggish the first part of the week, but steadied toward the latter part as spot orders increased. Inquiries for kerosene fell off, but the price of that scare product remained firm.

The sluggishness of U. S. Motor gasoline pulled natural gasoline down with it. However, the movement in natural gasoline was steady the latter part of the week at 10½ cents.

Considerable gasoline from the Shreveport territory went to the Chicago markets last week, which aided in steadying of that product in this territory the latter part of the week. One refiner gained a brisk business during the closing days of the week, while others reported their's more steady.

Gas oils, which have been strong in this territory for several weeks, weakened along with other products. Distillate likewise was not in heavy demand. Fuel oil also weakened.

PRODUCTION REPORTS UNDER TEXAS INQUIRY

AUSTIN, Tex., Sept. 18.—The Lower House of the Texas Legislature, in special session, has ordered an investigation of the administration of Gov. Miriam A. Ferguson, amended just before passage to include oil and sulphur companies. It was charged that the State has been losing $3,000,000 to $7,000,000 a year in taxes because of incompetent reports to the State Controller by some of these companies on their production.

TIDE WATER'S PURCHASE

SHREVEPORT, La., Sept. 18.—Tide Water Oil Co. has purchased interests of O. W. Clarke, trustee, in about 20 producing wells in Winn and La Salle parishes, Urania district, Louisiana, for $750,000.

URANIA SALE

WINFIELD, La., Sept. 18.—The leading event in this section was the reported sale of the O. W. Clarke trustee holdings in Winn and LaSalle Parishes to the Deepwater Oil Co. of Houston, Tex., for $750,000.

Carson County Area Extended 7 Miles

Roxana Well Makes 1,200 Bbls. in First 24 Hours, Now Doing 5 Bbls. per Hour. Oil Is 38.5 Gravity and Will Pour at 25.

By C. D. Lockwood
Staff Correspondent, Texas Panhandle

While the Pampa Pool of Gray County was failing to show the results which operators there have been anticipating, Carson County came back into the limelight last week with a seven-mile extension, opening up what appears to be another prolific spot in the lime along the flank of the Granite Ridge, and production of the entire Panhandle district reached a new high of 120,815 bbls. from 434 producing wells, not all of which, however, were allowed to produce.

The Carson County discovery, made by the Roxana Petroleum Corp., in its No. 1 Bryan, C NE of Section 92, Block 4, 11 miles east of the main production in that county, was important from several standpoints. The well flowed 600 bbls. in 18 hours from 3,174-78 feet and was shut in because of insufficient storage, being allowed to produce only enough each day to relieve the pressure on the sand. The company has 2,000 bbls. storage on the location and is planning to build a line to White Deer to handle the production.

One of the most important facts concerning this well is the difference between the quality of its oil and that found in the present main producing area. The gravity is 38.5 degrees, corrected, and tests indicate that it will pour at 25 degrees.

Lease Deals Follow

Several leases deals of considerable size were made as a result of this discovery. Roxana Petroleum Corp. bought the south half of the southeast of Section 106, Block 4, paying $1,000 an acre, and the Canyon Oil Co. purchased the east 50 acres of the northwest quarter of Section 92, three eighths of a mile west of the well, for $1,000 an acre cash and $750 an acre in oil. A British concern also bought the southwest of the northwest and the northwest of the southwest of Section 113, Block 4, paying $600 an acre cash and $400 in oil.

One of the largest lease transactions of recent weeks was the purchase of the Westex Oil Co.'s 100 acres in the southeast of Section 13, Block Y, Hutchinson County, by Boston interests for $1,500,000, of which $750,000 is cash and the remainder to be paid in installments of $250,000 every four months. This lease has been producing about 3,000 bbls. daily.

The Gulf Production Co. completed another excellent producer north of the Canadian River on its Dial lease. It was No. 24 Dial in Section 1, Block I, and it flowed 1,085 bbls. after a 40-quart shot at 2,772-2,812 feet; No. 25 Dial flowed 240 bbls. at 2,936 feet, and was showing 2 bailers of water an hour.

White Eagle Oil & Refining Co. brought in some good wells, also. No. 1 Hedgecock, in Section 39, Block V, swabbed 492 bbls. the first 24 hours at 2,785-2,892 feet; No. 3 swabbed 500 bbls. at 2,880 feet; and No. 4 swabbed 315 bbls. at 2,798 feet. Gulf Production Co., Panhandle Co., Panhandle & Cline's No. 2 fee flowed 165 bbls. at 2,980 feet.

McMan Oil & Gas Co has made a location in the NW SE SW of Section 107, Block 4, Carson County, and McCullough has also made a location in the NE SW, same section, near the Roxana Petroleum Corp.'s discovery.

Texas Panhandle Completions

Hutchinson County

Goldelline Oil Co.'s No. 1 J. A. Whittenburg, Section 89, Block Z, flowed 180 bbls. natural at 3,003-32 feet. Alaska Petroleum Co.'s No. 1 E. Cockrell, Section 2, Block B-3, was shot with 210 quarts at 2,928-3,045 feet, total depth 3,069 feet, and made 150 bbls. Badger Oil Co.'s No. 2 Tom Lewis, Section 5, Block M-23, was fishing casing at 3,000 feet and flowing 50 bbls. through the open hole. Buffalo Oil Co.'s No. 1 Smith, Section 14, Block Y, was shot with 300 quarts at 2,996-3,076 feet, total depth 3,083 feet, and flowed 200 bbls. Coble & Whittenburg's No. 1 J. A. Whittenburg, Section 12, Block Y, had lime at 2,765-2,840 feet, total depth 2,908 feet. Water showed up from 2,846 to 2,908 feet and the well was swabbing 100 bbls., 25 per cent water. Delmar Oil Co.'s No. 2 Johnson, Section 20, Block Y, was making 94,000,000 feet of gas at 2,710-60 feet. Derby Oil Co.'s No. 1 Johnson, Section 20, was good for 1,000 bbls. after a shot of 140 quarts in the lime at 2,955-3,023 feet; new locations have been made for Nos. 2, 3 and 4 on this lease.

Dixon Creek Oil Co.'s Nos. 7, 11, 12, 19, 20, 27, 28 are all shut down on top of the pay awaiting pipeline connections. Nevertheless a new location has been made for No. 37 and the rig is being built.

Echo Oil Co.'s No. 3 Smith, Section 11, Block Y, flowed 700 bbls. natural at total depth of 2,760 feet; No. 4 was shot with 100 quarts at 2,765-2,836 feet, total depth 2,840 feet, and flowed 200 bbls. Empire Gas & Fuel Co.'s No. 2 J. F. Weatherly, Section 19, Block Y, was shot with 150 quarts at 2,935-3,037 feet and flowed 200 bbls.; No. 7 J. F. Weatherly was flowing 200 bbls. at 2,985-3,006 feet and was to be shot. Fly-Blackburn Oil Co.'s No. 2 J. F. Weatherly, Section 19, Block Y, was flowing 100 bbls. at 2,921-70 feet.

Marland Oil Co.'s No. 4 J. A. Whittenburg, Section 65, Block 46, flowed 100 bbls. at 2,900-35 feet; No. 5 flowed 260 bbls. following an 80-quart shot at 2,874-2,905 feet, total depth 2,908 feet; No. 5 Perkins-Dial in Section 1, Block Z-02, was shot with 40 quarts at 2,797-2,810 feet and flowed 500 bbls. afterward.

S. D. and W. W. McIlroy's No. 4 Smith in Section 14, Block Y, was shot with 520 quarts at 2,933-3,011 feet, total depth 3,017 feet, and flowed 1,680 bbls. Pay was at 2,907-40 feet. McMan Oil & Gas Co.'s No. 2 Johnson-Martin Gray, in Section 21, Block Y, made 340 bbls. at 2,925-31 feet. Permian Oil Co.'s No. 1 W. R. Harvey, in Section 5, Block Y, was abandoned as dry at 3,280 feet.

Phillips Petroleum Co.'s No. 1 Johnson-Dorsett, Section 64, Block 46, was good for 300 bbls. at 2,665-2,736 feet; No. 1 Johnson-Walling, Section 6, Mary Whitley Survey, made 175 bbls. at 2,914-24 feet; No. 2 Whittenburg-Patton, Mary Whitley Survey, was shot with 80 quarts at 2,865-2,929 feet and was completed for 300 bbls.; No. 4 made 100 bbls. at 2,895-2,931 feet; No. 5 also was a 100-bbl. well at 2,885-2,908 feet. Phillips Petroleum Co. and Coble Oil Co.'s No. 18 J. A. Whittenburg, Section 13, Block Y, was good for 100 bbls. at 2,929-85 feet. Prairie Oil & Gas Co.'s No. 6 Johnson-A, in Section 20, Block Y, flowed 100 bbls. of oil, 50 per cent water, at 2,852-2,944 feet; No. 2 Johnson B, Section 4, Block B-4, bridged after an 80-quart shot at 2,920-50 feet, total depth 2,954 feet, and made 139 bbls. while cleaning out.

Westex Oil Co.'s No. 8 J. A. Whittenburg, Section 13, Block Y, flowed 800 bbls. at 2,945-3,015 feet. White Eagle Oil & Refining Co.'s No. 7 Johnson, Section 64, Block 46, made 75 bbls. after a 120-quart shot at 2,725-63 feet.

Carson County

Gulf Production Co.'s No. 13 Burnett, Section 116, Block 5, made 70 bbls. from pay at 3,068-3,142 feet. Marland Oil Co.'s No. 7 Burnett, Section 107, Block 5, pumped 28 bbls. at 2,967-3,030 feet. The Texas Company's No. 8 Burnett flowed 100 bbls. at 3,053-75 feet.

Gray County

Haughn and others abandoned the location for their No. 1 Dauer, Section 237, Block B-2, on the Carson-Gray County line. Wilcox-Pampa Oil & Gas Co.'s No. 6 Worley & Reynolds, Section 62, Block 3, flowed 630 bbls. at 2,938-65 feet.

Wheeler County

McFarland's No. 1 Rochelhoffer, in Section 70, Block 23, has been abandoned at 2,389 feet. Mid-Kansas Oil & Gas Co.'s No. 1 W. C. Company, Section 12, Block 27, flowed 32 bbls. in 12 hours at 2,195-2,275 feet.

TEXAS PANHANDLE WILDCATS

Armstrong County

Red Hill Corp.'s No. 1 Puckett Brothers, Section 3, Hooper & Wade Survey, drilling at 600 feet.

Carson County

Amatex Oil Co.'s No. 1 E. S. Polling, Section 22, Block Y-2, shut down at 1,980 feet. Empire Gas & Fuel Co.'s No. 1 Burnett, Section 127, Block 5, drilling at 2,910 feet. Gibson Oil Corp.'s No. 1 G. W. Witter, Section 1, Block 7, drilling 1,350 feet. This well was reported temporarily abandoned for several weeks. Humble Oil & Refining Co.'s No. 1 Burnett, Acct. 3, Section 127, Block 5, drilling 750 feet. No. 1 Burnett, Acct. 4, Section 12, Block 4, drilling 800 feet. Navajo Oil Co.'s No. 1 E. S. Polling, Section 22, Block Y-2, rig. Nunn & McCauley's No. 1 E. F. Bryan, new location, rig up. Prairie Oil & Gas Co.'s No. 1 Deahl, Section 5, Block 5, drilling 2,410 feet. Republic Production Co.'s No. 1 C. R. Garner, Section 103, Block 4, top of lime 2,140 feet, drilling 2,300 feet. White Deer Oil Co.'s No. 1 Jordan, Brown and others, Section 114, Block 4, trying to shoot at total depth 2,860 feet, with tools in hole.

Childress County

Gibson Oil Corp.'s No. 1 Smith, old total depth 2,504 feet, drilling deeper at 2,510 feet.

Cochran County

J. C. Whicker's No. 1 Landon, rig.

Collingsworth County

Von Allmen and others' No. 1 McDowell, Section 107, Block 22, rigging up tools. Gibson Oil Corp.'s No. 1 Williams and others, Section 5, Block 13, running 8-inch at 1,500 feet. Harmon & Reams' No. 1 Wilson (Scott), new location. Martin and others' No. 1 Mrs. T. V. Norwood, Section 30, Block 16, spudded and shut down.

Dallam County

James and others' No. 1 fee, Section 9, Block 47½, drilling 2,870 feet.

Hansford County

F. W. Dillard and others' No. 1 F. A. Davis, Section 50, Block 2, spudded and shut down. Oklavania Oil Co.'s No. 1 Whitson, C NW, Section 2, Block R. B. & B. Survey, drilling 800 feet.

Gray County

Archer, Blake and others' No. 1 Turneau, Section 111, Block B-2, rigging up tools. Bay Shore Petroleum Co.'s No. 1 C. W. Bradford, Section 148, same block, cementing casing to shut off 165,000,000 feet of gas at 2,666 feet. Blackwell & McGee's No. 1 Bowers, Section 92, Block B-2, 12-inch and 15-inch casing stuck at 335 feet. Canyon Oil Co.'s No. 1 Jackson Estate, Section 60, Block B-2, skidding rig. Constantin and others' No. 1 Dial, Block 25, shut down at 2,000 feet. Cranfill Brothers' No. 1 T. B. Noble, Section 10, Block A-6, top of lime at 1,745 feet. Eagle Creek Oil Co.'s No. 1 J. Hopkins, Section 66, Block B-2, spudded and shut down. H. B. Ellers' No. 1 Crews, Section 12, Block 25, rig on ground. Empire Gas & Fuel Co.'s No. 1 Benton, Section 64, Block 3, drilling at 2,900 feet; No. 1 B. Hughey, Section 129, Block 3, drilling at 2,585 feet; No. 1 J. J. Wall, Section 161, Block 3, drilling 1,920 feet.

Jack Greenwood and others' No. 1 H. B. Lovett, Section 26, Block B-2, drilling 620 feet. Haughn and others' No. 1 A. J. Daur, Section 237, Block B-2, cellar. Magdalene Oil Co.'s No. 1 J. E. Williams, SW cor. Section 17, Block 1, A. C. H. & B. Survey, spudded 85 feet and shut down. Nabob Oil Co.'s No. 1 J. S. Morse, Section 68, Block 25, fishing at 1,915 feet. Magnolia Petroleum Co.'s No. 1 Heithholt, rig on the ground. Pampa Oil Co.'s No. 1 W. R. Campbell, Section 90, Block 3, spudding 400 feet. Phillips Petroleum Co.'s No. 1 H. M. Davis, spudding 350 feet. Henry Riley's No. 1 J. M. White, Section 212, Block M-2, rig up, waiting on water. Roxana Petroleum Corp.'s No. 1 B. E. Finley, in the B. E. Chaney Survey, drilling 750 feet. Shamrock Petroleum Corp.'s No. 2 Merten, Pampa Pool, Section 82, drilling 2,670 feet. The Texas Company's No. 1 C. W. Saunders, Section 81, Block 5, cemented 8-inch 2,518 feet. Travis and others' No. 1 J. Back, Section 44, Block 25, rig blown down. Upham Gas Co.'s No. 1 W. E. Grammage, Section 4, Block 25, location. Weir, Kribs & Finklea's No. 1 B. F. Talley, Section 114, Block M-2, spudded and shut down for water. Young and others' No. 1-A Holmes, Section 106,

(Continued on Page 138)

NIGGER CREEK CONTINUES DECLINE ALTHOUGH THREE WELLS COMPLETED

MEXIA, Tex., Sept. 20.—The Nigger Creek Field in Limestone County continues to decrease in production although three additional wells were completed during the past week.

At this time estimates of the amount of b.s. and water which is being produced with the oil show that out of a total of 12,517 bbls. from 40 wells (which was the figure for Sunday of this week) 60 per cent is pipeline oil and 40 per cent is foreign matter.

There are now 40 wells producing in this field, and it seems that the excitement of the Nigger Creek district is a thing of the past. The production of the field on Sunday was:

	Bbls.
Atlantic O. P. Co., Nos. 1 & 2 Rosson	407
Barkley & Meadows, No. 1 Rosson	84
Godley O. Co., Nos. 1, 2, & 3 Rosson	849
No. 1-A	770
Moss & Keeling, Nos. 1 and 2 Rosson	1,188
Murchison & Fain, No. 1 Rosson	130
No. 1 Holden	124
Pure Oil Co., No. 2 Atkins	240
Shaffer and others, No. 1 Rosson	215
Simms Oil Co., No. 1 Rosson	196
E. L. Smith Oil Co., No. 1 Rosson	795
Transcontinental Oil, Nos. 1, 3, 4 Atkins	260
No. 1 Cochrun	45
Nos. 1, 2, 3 and 4 Cogdell	2,732
No. 1 Erskine	270
No. 1 Medlock	35
Nos. 1 and 4 Rosson	1,022
No. 2 Rosson	395
No. 1-A Rosson	145
Nos. 2-A, 8-A and 10-A Rosson	575
Nos. 4-A, 5-A and 11-A Rosson	595
Nos. 3, 5, 6, 7 and 9 Rosson	1,175
No. 7-A Rosson	273
Total	12,517

There has been a general shutting down of wells, and no additional locations were announced.

Another Large Producer in Hurdle Area

Dixie Oil Co.'s No. 7 Burleson in Crane-Upton Counties District Variously Estimated From 60 to 270 Bbls. Initially an Hour

By C. D. Lockwood
Staff Correspondent, North Texas Fields

FORT WORTH, Tex., Sept. 20.—Jones County claimed the close attention of hundreds of land men, geologists and scouts in north Texas during the past week while the Phillips Petroleum Co.'s No. 1 Joe Winters, in the SW cor. N half, Section 19, Block 19, T. & P. Survey, was flowing 1,000 bbls. a day with regularity.

On Monday of this week, the Hurdle district of Upton County in west Texas also broke into the limelight again with reports of another large producer, the Dixie Oil Co.'s No. 7 Burleson, west offset to the Independent Oil & Gas Co.'s No. 2 Burleson, which was reported last week, having been drilled into the pay at 2,315 feet. Reports Monday evening were conflicting but the lowest estimate of the new well's output was 60 bbls. an hour, while the highest was 270 bbls. an hour. The oil tests 28 degrees. Reports concerning the presence of water were also conflicting, some saying none and others as high as 20 per cent. The Independent's No. 2 Hughes was still producing 1,200 bbls. of pipeline oil, so any of the reports may be correct.

Wichita County established the fact that no producing area may be considered entirely "played out" when Clark and others' No. 8 Ward & Todd, in the old Sunshine Hill Pool flowed 1,250 bbls. in 24 hours from 1,846-53 feet. This is said to be the largest well in Wichita County in the past 10 years.

The area around Thrifty in Brown County also attracted attention when the Amerada Petroleum Corp.'s No. 1 J. H. and T. O. Fry, on the east line of the company's lease in the George Stubblefield Survey, Section 622, topped sand at 1,305 feet and with the bit barely 6 inches in it started flowing 14 bbls. an hour.

A new Cooke County pool appears in the making, near Muenster, in Block 17, George Ivy Survey. Lynch & Stahl's No. 1 is estimated good for 10 bbls. of 35.5 gravity oil at 796-806 feet.

In Archer County, the Wanderer Oil Co. and Perkins & Cullum's No. 1 S. M. Cowan, Section 146, Robert Carson Survey, had oil sand at 1,496½-98½ feet and at 1,501-07 feet. On Monday it swabbed 250 bbls. of oil and no water and was still swabbing.

WEST TEXAS COMPLETIONS

Crane County

Magnolia Petroleum Co's No. 1 O'Keefe (University), pumped 100 bbls. at 2,982-3,051 feet. Marland Oil Co.'s No. 1 Hughes-Gibbs swabbed 237 bbls. in 36 hours after plugging back from 2,345 feet to 2,335 feet. Top of pay was 2,308 feet. The Texas Company's No. 2 King swabbed 125 bbls. following a shot of 60 quarts at 2,302-17 feet; No. 1-F Union Land Co., which was put on the pump September 9, averages 20 bbls. of oil and 45 bbls. of water from pay at 3,014-16 feet. Tidal Oil Co.'s No. 1 University pumped 60 bbls. at 3,013-50 feet.

Crockett County

The California Co.'s No. 2 University was dry and abandoned at 2,728 feet. Humble Oil & Refining Co.'s No. 8 Powell pumped 45 bbls. at 2,667-79 feet; No. 10 Powell pumped 50 bbls. at 2,673-85 feet.

Howard County

Joe Edgar's No. 1 Roberts was dry and plugged at 1,800 feet. Marland Oil Co's No. 2 Chalk swabbed 95 bbls. after a 40-quart shot at 1,597-1,637 feet.

Mitchell County

The California Co.'s No. 16 Morrison, Lease 2, had pay at 2,935-3,050 feet and made 55 bbls. after a shot of 270 quarts at 2,900-3,036 feet, and one of 120 quarts at 2,902-50 feet.

Reagan County

Big Lake Oil Co.'s No. 76 University flowed 700 bbls. at 2,937-45 feet, with top of lime at 2,839 feet; No. 86 University flowed 490 bbls. at 2,924-50 feet, top of lime at 2,825 feet. Texon Oil & Land Co.'s No. 48 University, Group 1, flowed 420 bbls. at 3,012-39 feet, top of lime at 2,905 feet; No. 50 flowed 220 bbls. at 2,955-96 feet, top of lime at 2,875 feet; No. 51 pumped 260 bbls. at 3,070-85 feet, top of lime at 2,960 feet.

Upton County

Humble Oil & Refining Co.'s No. 1 A. S. Burleson pumped 115 bbls. at 2,155-90 feet; No. 1 Ricker & Dodson pumped 155 bbls. Independent Oil & Gas Co.'s No. 6 Taylor was flowing 41 bbls. through 2-inch tubing from pay at 2,029-2,208 feet, after plugging back from 2,213 feet where it found a bailer of sulphur water an hour. The same company's No. 2 Burleson flowed 1,268 bbls. of pipeline oil along with 5 per cent water on September 14, and 1,408 bbls. with 8 per cent water September 15, from pay at 2,309-10 feet. McMan Oil & Gas Co.'s No. 1 M. L. Baker pumped 25 bbls. at 2,145-67 feet. Marland Oil Co.'s No. 9 Sanger topped the pay at 2,267 feet and at 2,385 feet, sulphur water was encountered, rising 450 feet in the hole. The well was being plugged back to 2,350 feet, and was swabbing 90 bbls. of oil. Same company's No. 10 Sanger pumped 70 bbls. at 2,208-45 feet after a shot of 170 quarts at 2,210-45 feet; No. 11 Sanger had pay at 2,176-2,260 feet and after a shot of 180 quarts at 2,209-60 feet pumped 35 bbls.; No. 12 Sanger had pay at 2,205-57 feet and was shot with 170 quarts at 2,190-2,254 feet, making 50 bbls. on the pump; No. 13 Sanger had 1,600 feet of oil in the hole at 2,188-2,255 feet and was still drilling; No. 19 Burleson pumped 130 bbls. at 2,107-74 feet after a shot of 200 quarts at 2,110-74 feet; No. 20 Burleson had pay at 2,125-80 feet and after a 240-quart shot pumped 75 bbls.; No. 21 Burleson had pay at 2,115-2,240 feet and was plugged back to 2,200 feet. It was shot with 60 quarts at 2,170-85 feet and swabbed 45 bbls.; No. 22 Burleson swabbed 30 bbls. when shot with 240 quarts at 2,135-99 feet. Pay was from 2,105-40 feet. Roxana Petroleum Corp.'s No. 1 E. S. Hughes was flowing 237 bbls. at 2,161-65 feet. The Texas Company's No. 1 R. King, which found pay at 2,005-2,177 feet, was shot with 60 quarts at 2,033-43 feet and swabbed 100 bbls. afterward.

NORTH TEXAS COMPLETIONS

Archer County

Bridwell & Heydrick's No. 1 Netherton had a water sand at 1,398-1,405 feet and was plugged at 1,768 feet. G. J. Brown's No. 4 Perkins pumped 30 bbls. of oil and 20 bbls. of water at 1,018-26 feet. Kruger & Wilson's No. 1 Turberville found salt water at 1,484-85 feet and was abandoned at 1,550 feet. Marland Oil Co.'s No. 5 Turberville made 200 bbls. at 1,497-99 feet; No. 6 pumped 200 bbls. of oil and 1 bbl. of water at 1,511-18 feet. Plains Production Co.'s No. 1 Pease estate was dry and abandoned at 1,504 feet. Simms Oil Co.'s No. 7 Turberville-A was a 200-bbl. well at 1,506-09 feet. Simms Oil Co. and Consolidated Oil Co.'s No. 2 Turberville, in Block 146, made 10 bbls. at 1,494-1,506 feet. The Texas Company's No. 4 Turberville-C pumped 325 bbls. at 1,504-31 feet; No. 5 made 550 bbls. at 1,507-31 feet; No. 6 made 347 bbls. at 1,502-26 feet; No. 7 flowed 900 bbls. in 18 hours at 1,498-1,525 feet; No. 8 had the sand at 1,494-1,522 feet and was rigging up to swab. Texhoma Oil & Refining Co.'s No. 16 Hamilton swabbed 15 bbls. in 6 hours and pumped 20 bbls. of oil and 12 bbls. of water in 21 hours from sand at 1,808-11 feet; No. 3 Kemp & Kempner swabbed 87 bbls. in 20 hours at 1,793-94 feet and was being put on the pump.

In the southern half of the county, Bridwell & Heydrick's No. 2 Abercrombie & Taylor was dry and abandoned at 1,370 feet. Gates' No. 12 Thomas pumped 65 bbls. at 1,139-67 feet. Golding & Cochran's No. 1 Crawford had a small showing at 1,216-37 feet. Grebin and others' No. 1 Young was dry and plugged at 1,540 feet. Humble Oil & Refining Co.'s No. 16 Hamilton made 20 bbls. at 1,263-67½ feet. Jeffers & Jeffers' No. 4 Andrews was dry and plugged at 1,030 feet. Kimmel & Dillard's No. 1 Parkey was also a failure at 1,650 feet. Magnolia Petroleum Co.'s No. 2 Hudson pumped 43 bbls. at 1,154-57 feet.

Marland Oil Co.'s No. 4 Thomas-B was shot with 5 quarts at 1,165-83 feet and swabbed 82 bbls. in 14 hours. Texhoma Oil & Refining Co.'s No. 2 Thomas found dry sand at 1,193-1,200 feet and was abandoned at 1,208 feet. Tidal Oil Co.'s No. 1 Farmer had 200 feet of oil in the hole at 1,474-75 feet and was setting 6-inch casing. Lee Wilson's No. 1 Prideaux had 150 feet of oil in the hole at 590-623 feet.

Brown County

Amerada Petroleum Corp.'s No. 2 Fry had a show of oil and hole full of water in sand at 1,339-60 feet and was plugged and abandoned. Its No. 1 J. H. and T. O. Fry in the George Stubblefield Survey, Section 622, was flowing 14 bbls. an hour from 6-inch penetration in sand topped at 1,305 feet; No. 1 Turner had a show of oil in sand at 2,176-96 feet and was drilling at 2,206 feet.

Blackstone Oil Co.'s No. 1 Jones was a failure at 1,398 feet. J. S. Cosden's No. 10 Gafford made 25 bbls. at 1,224-38 feet; No. 2 East-Westerman made 60 bbls. at 1,223-43 feet; No. 1 A Mrs. T. S. Williams was junked at 580 feet, skidded and spudded on new hole. Curry & Moore's No. 1 Kilgore made 10 bbls. at 1,277-88 feet, total depth 1,302 feet. Gillespie's No. 7 Newton made 40 bbls. at 1,264-81 feet, total depth 1,289 feet. Gilman and others' No. 18 Newton made 20 bbls. at 1,242-64 feet. Gilman & McMurray's No. 8 Moore made 25 bbls. at 1,228-42 feet. Humble Oil & Refining Co.'s No. 9 B J. C. Kilgore flowed 150 bbls. at 1,167-80 feet.

Kone Production Co.'s No. 3 Foster had sand at 1,185-1,210 feet and was cleaning out; No. 4 made 225 bbls at 1,181-1,211 feet; No. 5 is a location and No. 6 was drilling at 600 feet.

William Lester's No. 4 Fry made 200 bbls. at 1,312-14 feet; No. 5 was drilling at 1,000 feet and No. 1-A at 1,100 feet. Louisiana Oil & Refining Co.'s No. 5 Henslee made 200 bbls. at 1,271-85 feet. Midwest Exploration Co.'s No. 11 Suttles was shot with 20 quarts at 1,134-51 feet and made 30 bbls. Moore and others' No. 1 Brannum was junked at 550 feet and the rig skidded. Pool and others' No 1 Newton was dry and abandoned at 1,192 feet. Prairie Oil & Gas Co.'s No. 8 Wooldridge made 60 bbls. at 1,251-84 feet. Sawyer and others' No. 1 White was shot with 40 quarts at 1,214-45 feet and produced 360 bbls. E. L. Smith Oil Co.'s No. 1 Brooks was dry and abandoned at 1,410 feet; No. 1 Cason & Grantham was shot with 30 quarts at 1,230-42 feet and again at 1,220-42 feet and was cleaning out. The Texas Company's No. 2 Hickman made 300 bbls. at 1,179-87 feet. West and H. Y. Oil Co.'s No. 11 Newton made 25 bbls. at 1,200-16 feet. Williamson and others' No. 4 Keller pumped 60 bbls. at 1,134-51 feet; No. 5 Keller was shot with 30 quarts at 1,140-59 feet, total depth 1,165 feet, and made 150 bbls. Campbell & Rosenfield's No. 1 Pierce was dry and

(Continued on Page 138)

TESTS SOUTH OF THE RIO GRANDE PLANNED BY OPERATORS IN MEXICO

By George Blardone
Staff Correspondent, Mexican Fields

TAMPICO, Mex., Sept. 17.—With but two wells completed in the pay, Mexican fields were rather dull the past week. The two wells were International Petroleum Co.'s No 277, Lot 5, in the Cacalilao sector of the northern fields, and Cia. Pet. Maritima's No. 16 Ojital, in the Federal zone of the Panuco district. The former was completed at 1,965 feet; the latter at 1,635 feet. However, insofar as the latter is concerned, Cia. Pet. Territorial's No. 11 Ojital, another Federal zone well, was drilled into salt water at 1,770 feet, as the week ended, and just what effect this will have on the Maritima well remains to be seen when the latter is flowed. The two pay wells are rated at 1,500 bbls. each.

In the south fields, Huasteca Petroleum Co. has a big fluid well in No. 73 Cerro Azul which, at a subsea level depth of 1,355 feet, is showing say some 15 per cent oil at a flow of 70,000 bbls., the open pressure being 850 pounds. This is rather unusual, and the well will probably make some commercial production when the pressure drops and allows the well to be handled. Mexican Eagle Oil Co.'s No. 17 San Geronimo drilled into salt water at 2,557 feet.

Other Failures

The other failures during the week were confined to the northern fields. Consolidated Oil Fields of Mexico's No. 6, Lot 6 Camolote, is a failure, making fluid at 2,150 feet. Transcontinental Petroleum Co.'s No. 218, Lot 4 Cacalilao, is a dry hole at 2,210 feet, as is its No. 273, same lot and sector, at 2,135 feet. Cia. Pet. Franco Espanola, (Marland) No. 33-A Limon, is a dry hole at 2,250 feet. La Corona Petroleum Co. drilled into salt water in its No. 185, Lot 4 Cacalilao, at 1,911 feet. Mordelo Vincent has a failure at 2,230 feet in his No. 29, Lot 14 W. Maguabes.

August Completions

There were some 62 wells completed during the month of August, of which 29 can be placed in the pay column, the remainder being failures. Of these 29, say 25 can be credited to the northern fields and 4 to the southern fields so far as producers are concerned. The flush production can be placed as follows:

(Continued on Page 142)

Seminole Area Causes Some Misgivings

Recent Events Tend to the Belief That Too Much Has Been Expected of the Territory. Tonkawa Extension Looks Bad.

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

The Seminole Pool in Seminole County and the northwest extension of the Tonkawa Field still hold the center of the stage in Oklahoma oil fields. At Seminole there has been the wildest scramble to erect derricks and start new wells, owing to the good production of three Wilcox sand wells.

Admitting that the wells have justified some optimism in the possibilities of the region, when it is considered that 200 rigs, locations and drilling wells are under way, it seems that someone is due to suffer the pangs of disappointment.

Considering the area and extent of Wilcox sand pools which have been discovered in the past, it is possible that the operators have permitted their enthusiasm to overrule their judgment, for the area of the average Wilcox sand pool is small, and covers only a fraction of the area which is now under intensive development.

The Independent Oil & Gas Co. and R. F. Garland's No. 1 Fixico, SW cor. NE Section 26-9-6, which was the discovery well in the Wilcox sand, is still producing wonderfully well, and upon its sixtieth day of productive life, it established a peak of 8,012 bbls. To date it has produced over 360,000 bbls. of oil, and this performance ranks it as the best Wilcox well ever found in that section of Oklahoma.

The other two Wilcox sand wells are not acting so well. The Gypsy Oil Co.'s No. 1 Carter, SE cor. NE NW Section 24-9-6, which started the Wilcox work in that section, is dropping daily, and on Sunday of this week it made 1,960 bbls. which was cutting 2½ per cent. On the same day the Amerada Petroleum Corp. and Gardner Petroleum Co.'s No. 1 Killingsworth, SE cor. SW NE Section 23-9-6, made 5,491 bbls. Although both of these wells are good producers, they do not rank with the Independent-Garland well, and they have both shown a slight decrease.

One of the most interesting aspects of the Seminole Pool is that the Gypsy Oil Co.'s No. 2 Fixico, SE cor. NW NE Section 26-9-6, has found the Hunton lime 106 feet lower than the Independent-Garland well. The very remarkable part of this is that in spite of the low position of the Hunton, the Gypsy well is good for 200 bbls. as it stands. This drop of 106 feet occurs in a quarter of a mile distance, and influences the thought that another fault may exist between it and the Independent-Garland well.

In that section of Seminole County, the surface is badly faulted, and this lends strength to the theory that the subsurface may also be faulted. At any rate the possibilities of wells northeast of the Gypsy's No. 2 Fixico are dimmed considerably by the find. There has been considerable discussion as to whether or not the formation found is the Hunton lime, but this seems to have been settled by the examination of samples by the paleontologists who have identified samples both of Hunton lime and also of Chattanooga shale, which occupies the position immediately above the Hunton. Owing to the subsurface peculiarities of this region, the well may still be a good producer, and its fate should be known in a few days.

Disappointment at Tonkawa

In the northwest extension of the Tonkawa deep sand field, there is ample cause for disappointment. Opinion that this would prove to be a field similar to the Tonkawa deep is now shattered by small wells being completed where gushers were expected. It now seems that this operation is only another Wilcox "pimple." On Sunday of this week, the Gypsy Oil Co.'s No. 1 Gardner, SE cor. NE SW Section 28-25-1w, made 857 bbls. of oil and 900 bbls. of water. This well was the cause of several wells being started, and had an initial production of 6,000 bbls. The Gypsy Oil Co.'s No. 2, NE cor. SW Section 28-25-1w, made 27 bbls. of oil and 17 bbls. of water from sand touched at 4,332 feet. No. 3, NW cor. NE SW Section 28-25-1w, is drilling at 4,254 feet. No. 4, SW cor. NE SW Section 28-25-1w, is dropping rapidly, and on Sunday made 30 bbls. of oil and 33 bbls. of water. One week ago this well made 900 bbls. Barnsdall Oil Co.'s No. 1, SE cor. NW Section 28-25-1w, made 1,230 bbls. of oil on Sunday and made an initial production of 1,430 bbls. when completed on Friday of last week. Skelly Oil Co. and Manahan's No. 4, NW cor. SE SW Section 28-25-1w, made 2½ bbls. of oil and has 2,000 feet of fluid, mostly water standing in the hole. The sand record on this well was 4,320-22 feet; and it is a quarter mile west and one location south of the Gypsy's No. 1 Gardner.

Seminole County

Prairie Oil & Gas Co. has a rig up for No. 1 Carter, SE cor. NW, Section 10-9-6. The rig is also up for No. 1 Spencer, SW cor. SE, Section 13-9-6. Kingwood Oil Co. and Roxana Petroleum Corp. have spudded No. 1, SE cor. SE, Section 22-9-6. Amerada Petroleum Corp. is drilling at 1,200 feet in No. 1, SW cor. SE NE, Section 23-9-6. No. 2, SE cor. NE, Section 23-9-6, is spudded. The rig is built for No. 1 Rentie, SE cor. NW NE, Section 23-9-6. Indian Territory Illuminating Oil Co. has the rig on the ground for No. 2 Rentie, SE cor. NE NE, Section 23-9-6. No. 1, SE cor. SE, Section 23-9-6. No. 1, SE cor. SE, Section 23-9-6, is drilling at 980 feet. The cellar is dug for No. 3 Rentie, SW cor. NE NE, Section 23-9-6. Carter Oil Co. has built the rig for No. 3 Fixico, NE cor. SW, Section 23-9-6. The rig is built for No. 2 Fixico, SW cor. SE SW, Section 23-9-6. Barnsdall Oil Co. has built the rig for No. 1 Carter, SE cor. NW, Section 24-9-6. No. 6, SW cor. NW, Section 24-9-6, is spudded. The rig is up for No. 8 Carter, NE cor. SW, NW, Section 24-9-6. Tidal-Osage Oil Co. has set the surface casing at 70 feet in No. 3, NW cor. SW, Section 24-9-6. Prairie Oil & Gas Co. has the rig up for No. 3 Tayeche, SW cor. NW, Section 25-9-6. The location is made for No. 4 Tayeche, NW cor. SW NW, Section 25-9-6. The rig is up for No. 5 Tayeche, SW cor. NW NW, Section 25-9-6. Magnolia Petroleum Co. is drilling at 450 feet in No. 1, NW cor. SW SW, Section 25-9-6. Prairie Oil & Gas Co. is rigging up No. 2 Tayeche, NW cor. NW, Section 25-9-6. Independent Oil & Gas Co. and R. F. Garland are drilling at 760 feet in No. 5, NW cor. SE NE, Section 26-9-6. No. 6, SW cor. SE NE, Section 26-9-6, is drilling at 500 feet. Indian Territory Illuminating Oil Co. has the rig up for No. 5 Bowlegs, SE cor. NW SE, Section 26-9-6. Tidal-Osage Oil Co. has built the rig for No. 7 Fixico, NW cor. NE NW, Section 26-9-6. Carter Oil Co. is drilling at 500 feet in No. 1, NE cor. NE, Section 27-9-6. Amerada Petroleum Corp. has made a location for No. 1 Fixico, NE cor. SW, Section 15-8-6. Independent Oil & Gas Co. has made a location for No. 3 McDaniel, NE cor. NW SE, Section 7-9-8.

Okmulgee County Completions

J. J. Schock has a dry hole at 2,730 feet in No. 1, NE cor. SE NE, Section 8-15-12. C. L. McMahon's No. 1, SE cor. SW SE, Section 9-15-12, had sand at 2,660-69 feet with a show of water in the bottom. It made 100 bbls. Jordan & Thompson's No. 5, CNL SE SW, Section 28-15-12, is estimated at 60 bbls. in sand at 2,140-43 feet. Holmes and others' No. 1, NE cor. SE SE, Section 7-14-11, is dry and abandoned at 3,048 feet. Devonian Oil Co.'s No. 1, SW cor. NE NE, Section 4-14-12, had sand at 2,695-2,711 feet and made 106 bbls. after a shot of 20 quarts. J. H. Rebold's No. 1, SW cor. SE SW, Section 25-14-12, is dry and abandoned at 2,771 feet. W. B. Pine's No. 2, SE cor. SW SW, Section 3-15-14, has 4,000,000 feet of gas in sand at 1,625-27 feet. The Texas Company's No. 16, CEL NW NE, Section 21-15-14, made 480 bbls. after a shot of 10 quarts in sand at 2,244-60 feet.

Osage County Completions

Phillips Petroleum Co.'s No. 8, NE cor. SE SW, Section 1-27-5, had sand at 2,930-91 feet and made 2,700 bbls. the first day. No. 7, NW cor. SE NE, Section 12-27-5, made 250 bbls. after a shot of 90 quarts in sand at 2,988-3,035 feet. No. 6, NE cor. SW SW, Section 7-27-6, made 125 bbls. after a shot of 70 quarts in sand at 2,960-97 feet. No. 15, NW cor. NE SW, Section 7-27-6, is good for 200 bbls. after a shot of 110 quarts in sand at 2,950-3,007 feet. No. 13, NW cor. SE, Section 7-27-6, had sand at 2,952-3,009 feet and made 1,450 bbls. Barnsdall Oil Co.'s No. 1, NE cor. SW, Section 6-26-5, is dry and abandoned at 3,070 feet. Phillips Petroleum Co.'s No. 11, SW cor. NE SW, Section 21-26-6, made 375 bbls. from sand at 2,903-59 feet. Lewis Oil Co.'s No. 10, SW cor. SE SE, Section 21-26-6, made 350 bbls. from sand at 2,916-41 feet after a shot of 70 quarts. Mid-Kansas Oil Co.'s No. 3, NW cor. SW NW, Section 22-26-6, is making 35 bbls. after a shot of 40 quarts in sand at 2,908-28 feet. Prairie Oil & Gas Co.'s No. 9, NW cor. SE SE, Section 21-25-6, made 150 bbls. after a shot of 17 quarts in sand at 2,693–2,705 feet. No. 13, NE cor. SE, Section 21-25-6, is good for 150 bbls. from sand at 2,724-34 feet. Carter Oil Co.'s No. 2, SW cor. NW SE, Section 6-24-8, made 40 bbls. from sand at 2,812-21 feet. No. 3, NE cor. SW SE, Section 6-24-8, made 115 bbls. from sand at 2,819-25 feet. C. F. Lake's No. 1, CEL SW, Section 6-24-8, had broken sand at 2,821-57 feet and made 5 bbls. after a shot of 20 quarts.

New Work

Phillips Petroleum Co.'s No. 5, NW cor. SW SW, Section 1-27-5, is drilling at 1,450 feet. No. 7, NW cor. SE SW, Section 1-27-5, is drilling at 1,100 feet. No. 9, SW cor. NW SW, Section 1-27-5, is drilling at 1,350 feet. No. 12, SE cor. NE SW, Section 1-27-5, is drilling at 1,600 feet. Mid-Kansas Oil Co. has the rig up for No. 6, NE cor. SE, Section 33-27-6. Moore and others are drilling at 1,200 feet in No. 1, NW cor. NE Section 6-26-5. Lorraine Oil Co. has the rig up for No. 16, NE cor. NW SW, Section 6-26-5.

Kay County

Comar Oil Co.'s No. 9 Buel, NE cor. NE, Section 21-29-1w, is drilling at 500 feet. No. 6 Duncan, SW cor. NE SW, Section 21-29-1w, is rigging up. No. 1-W, SE cor. SW, Section 5-28-1w, had sand at 2,766-2,800 feet and made 250 bbls. naturally.

H. F. Wilcox Oil & Gas Co.'s No. 4.

LOCATIONS IN TEXAS PANHANDLE AND NORTH CENTRAL TEXAS FIELDS

Hutchinson County

Block Y Petroleum Co.'s No. 1 H. E. Smith and others, 600 feet north and 780 feet west SE cor. SE SW, Section 8, Block Y. Dixon Creek Oil Co.'s No. 1 W. L. Kingsland, 330 feet north and east SW cor. SW SW, Section 6, Block Y, M. & C. Survey. Midwest Exploration Co.'s No. 1 J. A. Whittenburg, 330 feet south and east NW cor. north 80 acres, SW Section 13, Block Y; No. 2, 330 feet north and east SW cor. same north 80 acres; No. 3, 330 feet north and 990 feet east SW cor. same north 80 acres; No. 4, 330 feet north and 990 feet west SE cor. same north 80 acres; No. 5, 330 feet north and west SE cor. same north 80 acres; No. 6, 330 feet south and west NE cor. all north 80 acres, SW Section 13, Block Y; No. 8 J. A. Whittenburg, 330 feet south and east NW cor. NE SE Section 5, Block Y, M. & C. Survey. McIlroy Oil Co.'s No. 1 E. Cockrell, 330 feet south and west NE cor. Section 4, Block B-3, D. & S. E. Survey. Phillips Petroleum Co.'s No. 3 Johnson Brothers-Dorsett, 330 feet north and 995 feet west SE cor. north 160 acres, Section 64, Block 46, H. & T. C. Survey. Ryan Petroleum Co.'s No. 4 Johnson Brothers, 330 feet south and west NE cor. Lot 9, Johnson Brothers Subdivision, Mary Whitley Survey, No. 1. Skiatex Oil Co.'s No. 6 W. L. Kingsland, 990 feet north and 330 feet west SE cor. Section 6, Block Y, M. & C. Survey.

Potter County

The California Co.'s No. 1 G. A. Cary and others, 990 feet south and 330 feet east NW cor. NE, Section 6, Block Z-6, John H. Gibson Survey.

Carson County

The Texas Company's No. 5 M. C. Burnett, 400 feet north and 500 feet east SW cor. north half Section 89, Block 5, I. & G. N. Survey.

Gray County

Shamrock Petroleum Co.'s No. 4 Merten Brothers, 330 feet north and 990 feet west SE cor. NW Section 82, Block 3, I. & G. N. Survey; No. 5, 330 feet north and 990 feet east SW cor. NW Section 82, Block 3, I. & G. N. Survey.

Wichita County

Simms Oil Co.'s No. 2 W. H. Chilson, 150 feet north and 844.1 feet east SW cor. Section 3, League 4, Denton County School Land. Bridwell & Heydrick's No. 8 Ward & Todd, 240.2 feet south and 78 feet west NE cor. south 40 acres, Lot 13, Ward & Todd Subdivision, and located in Section 6, G. C. & S. F. Survey, A-625; No. 9, 150 feet south and 750 feet east NW cor. south 40 acres, Lot 13, Ward & Todd Subdivision, and located in same section; No. 10, 150 feet south and 1,050 feet east NW cor. south 40 acres, Lot 13, Ward & Todd Subdivision and located in same section and survey.

R. I. Carter's No. 1 T. L. Burnett and others, 150 feet south and east NW cor. east 160 acres, west 240 acres, north 320 acres, Section 28, H. & G. N. Survey; No. 4 R. & B. Ramming, 450 feet north and 150 feet west SE cor. R. I. Carter 20-acre lease and located in Section 1, H. T. & B. Survey, A-124; No. 5, 150

(Continued on Page 113)

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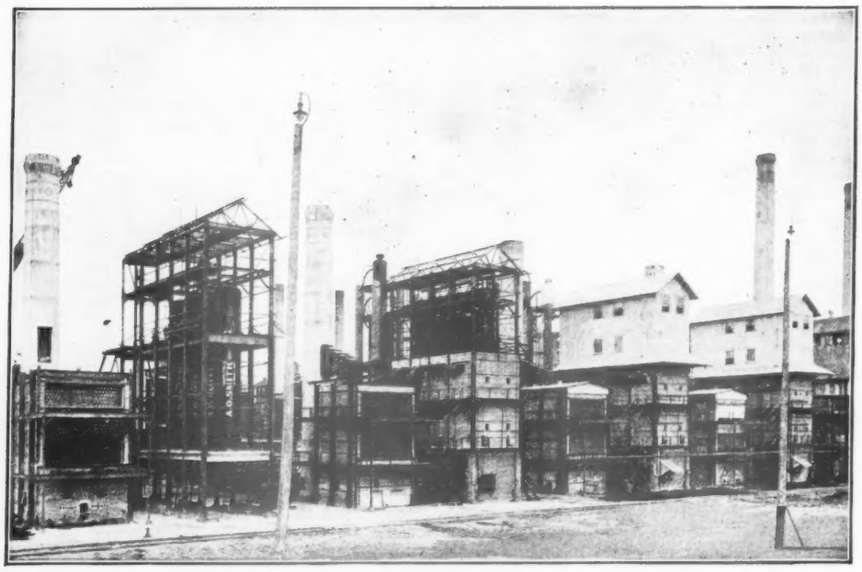

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SE cor. SW SW, Section 35-16-8, had sand at 3,625-45 feet and made 17 bbls. after a shot of 40 quarts. Shaffer Oil Co.'s No. 1, SW cor. SW, Section 16-17-8, had sand at 2,310-40 feet with a show of oil and gas and the Bartlesville sand was topped at 2,800 feet with 7,000,000 feet of gas. The boiler is being moved back. Transcontinental Oil Co.'s No. 1, NE cor. NE, Section 20-17-8, had the Bartlesville sand at 2,907-22 feet with 25,000,000 feet of gas and a spray of oil. Savoy Oil Co.'s No. 7, SE cor. SW NE, Section 22-17-8, had sand at 2,305-45 feet and is estimated at 15 bbls. It may be shot. C. G. Tibbens' No. 12, CNL NW SE, Section 26-14-8, had sand at 2,402-43 feet and made 10 bbls. after a shot of 80 quarts. No. 2, SE cor. NW, Section 25-15-8, made 10 bbls. after a shot of 90 quarts in sand at 2,397-2,455 feet. No. 3, NW cor. SW, Section 35-15-8, made 7 bbls. after a shot of 100 quarts in sand at 2,475-2,515 feet. McMahon and others' No. 1, SW cor. SE, Section 9-14-10, made 18 bbls. after a shot of 20 quarts in sand at 3,245-59 feet. Atlantic Oil Producing Co.'s No. 2, NE cor. NW, Section 16-14-10, had sand at 3,237-50 feet and made 150 bbls. naturally. No. 1-A, NE cor. SW SE, Section 15-14-10, made 320 bbls. naturally from sand at 3,225-43 feet. Empire Gas & Fuel Co.'s No. 2, NE cor. SW SW, Section 32-14-10, had sand at 3,395-3,417 feet and made 65 bbls. naturally. It made 142 bbls. after a shot of 20 quarts.

Bu-Vi-Bar Petroleum Co.'s No. 1, NW cor. NE SW, Section 33-19-10, is dry and abandoned at 3,235 feet. Gled Oil Co.'s No. 1, SW cor. NW NW, Section 13-19-8, is dry and abandoned at 2,421 feet. Magnolia Petroleum Co.'s No. 4, CWL NE SW, Section 5-18-7, made 150 bbls. naturally from sand at 2,595-2,609 feet. Shaffer Oil Co.'s No. 10-A, SE cor. SW, Section 32-18-7, had sand at 2,700-24 feet and is estimated at 30 bbls. Register Oil Co.'s No. 3 Murrell, CSL SW NE, Section 17-19-9, is dry and abandoned at 1,218 feet. Superior Oil Co.'s No. 1, SE cor. SW SW, Section 6-19-10, had a showing estimated at 50 bbls. in sand at 1,964-2,006 feet. Holmes and others' No. 4, SE cor. SW NE, Section 22-19-10, is abandoned at 2,085 feet. Tidal Oil Co.'s No. 9, NW cor. SW SW, Section 4-17-7, had sand at 2,195-2,240 feet and is making 14,000,000 feet of gas. Mid-Continent Petroleum Corp.'s No. 26, SE cor. SW SW, Section 15-17-7, made 10 bbls. after a shot of 40 quarts in sand at 2,996-3,001 feet. McCulloch Oil Co.'s No. 1, CSL SW SE, Section 13-17-10, made 15 bbls. in sand at 2,425-93 feet. Kirchner and others' No. 3, CEL NE SE, Section 23-17-10, is dry and abandoned at 2,583 feet.

New Work

T. B. Slick is rigging up No. 1 Peters, SE cor. SW NW, Section 23-16-8. Alvord & West have the timbers on the ground for No. 3 Freeman, CEL NE SW, Section 14-17-8. The location is made for No. 2 Tucker, NE cor. NW SW, Section 14-17-8. H. F. Wilcox Oil & Gas Co.'s No. 1 Hope, SE cor. NW SW, Section 3-17-9, is a location. C. G. Tibbens has spudded No. 1, NW cor. SW, Section 24-14-8. The Texas Company has rigged up No. 3 Yahola, SW cor. SW, Section 23-15-8. C. T. Davis has made a location for No. 1 Matthews, NE cor. SE NW, Section 18-15-9. Atlantic Oil Producing Co. has built the rig for No. 3 Bear, SW cor. NE NW, Section 16-14-10. The rig is on the ground for No. 3 Tiger, SW cor. NE. Section 16-14-10. T. B. Slick has spudded No. 2, CNL NE SW, Section 32-14-10. Burlingame and others have spudded a quadruplicate well in No. 12, SE cor. SW NW, Section 13-19-8. Magnolia Petroleum Co. is drilling at 335 feet in No. 2, C NW SE, Section 35-18-7. C. L. McMahon has spudded No. 1, SE cor. SW, Section 7-19-9. Register Oil Co. has machine in for No. 2 Murrell, CSL SE NW, Section 17-19-9. Olean Petroleum Co. has a rig up for No. 1 Boyd, NW cor. SW, Section 33-19-9. Superior Oil Co. and others have a machine in for No. 1-A Burnett, NE cor. NW NW, Section 7-19-10. Bu-Vi-Bar Petroleum Co. has the rig in for No. 1, NW cor. SE SE, Section 29-19-10. White Eagle Oil Co. has spudded No. 1, SW cor. NW, Section 31-18-10.

Payne County

Shaffer Oil Co.'s No. 1, NW cor. SW NE, Section 26-18-3, had sand at 4,293-4,322 feet and was plugged back to 4,317 feet and made 50 bbls. Empire Gas & Fuel Co.'s No. 4, NE cor. NW NW, Section 26-18-3, made 3,000,000 feet of gas and 60 bbls. of oil and 50 bbls. water from sand at 4,266-92 feet. Skelly Oil Co. and the Mulberry Oil Co. have spudded No. 3, SW cor. SE SW, Section 32-18-4. Producers & Refiners Corp. has a dry hole at 3,041 feet in No. 2-A, SE cor. SW, Section 7-18-5. Consolidated Drilling Co.'s No. 2, CEL SW NE, Section 8-18-6, had sand at 2,825-31 feet and made 15 bbls. after being shot with 20 and with 30 quarts.

Pawnee County Completions

J. S. Donohue's No. 1, NE cor. NW NE, Section 27-23-4, is shut in with 8,500 feet of gas in sand at 3,271-98 feet. Ossenbeck and others' No. 1, SE cor. NW, Section 22-20-3, is dry and abandoned after finding sand at 4,491-94 feet. Marland Oil Co.'s No. 1, NW cor. SE, Section 33-20-5, had sand at 3,674-3,725 feet and swabbed 40 bbls. Mid-Continent Petroleum Corp. and others' No. 2, SW cor. SE NW, Section 33-20-5, made 367 bbls. from sand at 3,679-3,721 feet. Fern Oil Co.'s No. 3, NE cor. SW NW, Section 22-20-6, had sand at 3,070-97 feet and made 60 bbls. naturally. Minnehoma Oil Co.'s No. 9, NW cor. NE NW, Section 24-21-7, had sand at 2,714-25 feet and made 20 bbls. after being shot with 10 and with 20 quarts. Southwestern Oil Fields Co. has a dry hole at 2,973 feet in No. 18, NE cor. SW NW, Section 24-20-8.

New Work

Watchorn Oil & Gas Co.'s No. 16 Miller, SW cor. NE SW, Section 33-23-3, is drilling at 650 feet. Victor Petroleum Co. is drilling at 600 feet in No. 1, CWL NW SW, Section 22-22-7. J. B. Grieves is drilling at 420 feet in No. 3-A, CWL SW SW, Section 31-21-8.

Cotton County

Valley Oil Co. and others have a dry hole at 2,521 feet in No. 1, SE cor. NW, Section 12-4s-10w.

Tillman County

S. C. Canary's No. 1, C NW SE, Section 8-4s-18w, is drilling at 700 feet.

Jefferson County

Joe Hivick and others' No. 1, NW cor. NE SE, Section 13-7s-6w, had gas sand at 812-854 feet with 15,000,000 feet of gas and some water in the bottom of the hole.

Stephens County Completions

Westheimer & Daube's No. 1, SW cor. SW, Section 19-2-9w, touched sand at 1,843 feet and made 225 bbls. the first 12 hours, and is now flowing 115 bbls. daily. Magnolia Petroleum Co.'s No. 1, NW cor. SW NW, Section 19-2-9w, is pumping 5 bbls. from gravel found at 1,843-72 feet. E. S. Carey's No. 2, CSL SW NE, Section 24-1-9w, is dry and abandoned at 2,402 feet. Magnolia Petroleum Co.'s No. 9, SE cor. SE, Section 25-1s-9w, pumps 30 bbls. from sand at 2,172-89 feet. Harry Hanbury's No. 1-A, SW cor. NW NE, Section 22-1s-8w, is dry and abandoned at 2,210 feet. No. 3, SW cor. SW, Section 27-1s-8w, is pumping 18 bbls. from sand at 2,200-07 feet. Walker Valley Oil Co.'s No. 3-A, SW cor. NE NW, Section 27-1s-8w, had sand at 1,675-84 feet and pumped 12 bbls. Carter Oil Co.'s No. 1, SW cor. SE, Section 28-1s-8w, swabbed 320 bbls. the first 24 hours from sand at 2,761-65 feet.

New Work

Magnolia Petroleum Co. has a rig on the ground for No. 1 Gora, SW cor. NE NW, Section 1-2-5w. Carter Oil Co.'s No. 1, SW cor. NW NE, Section 2-2-5w, is drilling at 1,409 feet. Magnolia Petroleum Co. has made a location for No. 1 Folsom, SW cor. NW NW, Section 2-1-5w. Brown & McAllister have a rotary rig up for No. 6 Moore, SE cor. SW, Section 20-1s-8w. Beard & Kolb have a rig up for No. 2 Dickens, SW cor. SW, Section 30-1s-8w. McMann and others have rigged up No. 11 Stephens, NE cor. NW, Section 33-1s-8w. Ellis Drilling Co. has rigged up a rotary for No. 2-A Stephens, CSL SW NW, Section 34-1s-8w. Medlin and others are drilling at 1,500 feet in No. 1 Burke, NW cor. NE, Section 34-1s-8w.

Comanche County

Cook & Graham's No. 1, SW cor. SW, Section 34-4-10w, is dry and abandoned at 1,471 feet.

Grady County Completions

Magnolia Petroleum Co. has completed No. 2, NW cor. NW, Section 6-5-9w. Sand was at 2,338-46 feet and the well is making 5 bbls. on the pump. Carter Oil Co. has a gas well in No. 1, SW

(Continued on Page 82)

DISAPPOINTING SILICEOUS LIME WELL NORTH OF WINFIELD, KANSAS

By J. L. Dwyer

The drilling in of a disappointing well in the siliceous lime pool north of the city of Winfield was the feature of the week's news in the Kansas fields. The well, Tidal Oil Co. and Skelly Oil Co.'s No. 1, NE cor. SE SW, Section 15-32-4, delimits production to the south and southwest of the discovery well, which is a quarter-mile to the north. The failure has a total depth of 3,365 feet and is being plugged back to the shallower sands where a showing was found.

Cowley County

Brady Brothers are drilling at 675 feet in No. 1, NW cor. SW SW, Section 19-33-3. In the North Winfield Pool, the J. A. Hull Co.'s No. 2, SE cor. NW, Section 15-32-4, had the Siliceous lime at 3,274-98 feet and made 374 bbls. naturally. No. 1, NE cor. SW, Section 15-32-4, had sand at 3,267-87 feet and made 366 bbls. Marland Oil Co. is drilling at 250 feet in No. 1, SW cor. SE, Section 31-34-3. Trees Oil Co. has spudded No. 4, NW cor. NE NE, Section 28-31-4. Shawver and others' No. 1 Shirtz, NE cor. NE, Section 20-34-3, is spudded. Roxana Petroleum Corp. has built the rig for No. 1 Jones, NW cor. NW, Section 21-34-3. S-H-E Oil Co.'s No. 2, SE cor. NE NW, Section 24-34-6, had a total depth of 2,965 feet and was plugged back to 2,155-85 feet and shot with 200 quarts and made 15 bbls. of oil and 50 bbls. of water.

Marion County

Franks and others' No. 1, SW cor. NW, Section 23-17-4, is spudded. Empire Gas & Fuel Co. has spudded No. 1 Witting, C SE NW, Section 34-18-4. Connell Oil Co. is drilling at 500 feet in No. 2 Greeley, NW cor. SE NE, Section 19-21-5.

Chase County

Chris Sheedy has a dry hole at 2,572 feet in No. 1, SW cor. NE, Section 13-21-9. Barnsdall Oil Co.'s No. 1-A, SW cor. SE SW, Section 36-22-9, is dry and abandoned at 2,591 feet.

Butler County

Vickers Petroleum Co.'s No. 1, NW cor. SW, Section 2-25-3, is spudded. Welch and others are drilling at 1,600 feet in No. 18 Wilhelm, CSL SW NW, Section 11-26-4. The location has been abandoned for No. 1-A, CSL NW SW, Section 11-26-4. Ramsey & Haines' No. 24, CNL NW SE, Section 24-26-4, had sand at 2,620-61 feet and made 5 bbls. naturally. Sinclair Oil & Gas Co. and the Empire Gas & Fuel Co.'s No. 11, SW cor. SE SE, Section 35-27-4, made 60 bbls. from sand at 2,540-79 feet. Phillips Petroleum Co.'s No. 2, NW cor. SE NW, Section 16-27-6, is dry at 3,220 feet. Richmond Drilling Co.'s No. 1, NE cor. NW, Section 17-27-6, had sand at 2,696-2,714 feet and made 30 bbls. after a shot of 40 quarts. The Texas Company's No. 1, SW cor. NE SE, Section 7-27-7, is dry and abandoned at 3,160 feet. Empire Gas & Fuel Co.'s No. 1, SW cor. SE, Section 12-27-7,

(Continued on Page 127)

CANE CREEK WELL INTO ROCK SALT AFTER FINDING A LITTLE OIL AND GAS

By Frank B. Taylor

CASPER, Wyo., Sept. 18.—The Cane Creek well of the Midwest Refining Co. and the Utah Southern Oil Co., in Utah, is drilling in rock salt at 3,677 feet. The showing that was found at 3,645 feet failed to materialize as a commercial producer and the bit ran into rock salt after finding a little oil and gas.

On the Shafer Dome 5 miles south of the Cane Creek well, the same two companies have set the 8 inch pipe at 2,330 feet, but a collar pulled off just as the string reached its place and some trouble is being had in getting the string out of the hole. The hole in this well is considered to be about 70 feet above the sand that produced the oil in the Cane Creek well.

In Colorado, the Repollo Oil Co. is drilling again after passing through the showing of gas and the hole is now at 4,750 feet. The gas show is not considered commercial.

The Gypsy Oil Co.'s well on the Garmesa Dome, Garfield County, is shut in waiting on a string of casing. This well showed a high-grade oil after blowing gas for a while. The casing is expected to be run next week and then the well will be opened and the sand drilled in so that the prospects will hardly be known before the first of the month.

The Utah Southern Oil Co. is setting 10-inch casing on the gas sand found at 2,044 feet on the Garland Dome in Park County, Wyoming. This well will make a commercial gas producer as it stands, but further drilling is expected as there are several known oil sands below the gas horizon.

Fort Collins Settling Down

The production of the Fort Collins Field in Colorado is settling down from the gusher wells that were found when the field was first drilled to a present production per well that is in the hundreds instead of the thousands of barrels. The Stuchell well, considered the largest well found in the Fort Collins Field, and which produced at the rate of 1,300 bbls. for many weeks, has now dropped to 300 bbls. daily production and is expected to hang at this figure for some time to come. Fort Collins and the Wellington Dome have been definitely outlined and no further extensions are expected, although the Union Oil Co. of California will have to drill a large number of wells to obtain all the production.

The Texas Company has made preparations at Tow Creek, Moffat County, Colorado, to drill six more wells in that field. The Texas Company opened the Tow Creek Field by drilling a wildcat to the Dakota sand; production was found in the shale and the area lies about 12 miles west of Steamboat Springs.

In the Wyoming fields the Midwest Refining Co. completed five new producers in the Salt Creek Field through its subsidiary companies. The Midwest Oil Co.

(Continued on Page 129)

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Excitement Over Lawson Area Well

Walber Test Blew In Making 5,000,000 Feet of Gas and 8,000 Bbls. of Fluid, 5 Per Cent Oil, and Then Went Dead

By James H. Dameron
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Sept. 20.—Eclipsing interest in all other areas in the district was the El Dorado area, which was kept in feverish excitement by the actions of wildcats in the Lawson territory east of the El Dorado Field, while in Louisiana the Haynesville Field is being watched closely as a potential deep zone producing area. At the same time operators observed with speculation the 10-cent cut in the price of Bellevue crude and the continued decrease in Smackover crude pipeline runs.

Latest in developments in the Lawson area was the blow out in what is commonly known as the Walber well, which is now Phillips Petroleum Co. and associates' No. 2 Cordell, Section 6-19-13. The well was being bailed, making salt water with a show of oil, and was 300 feet off bottom at 2,984 feet when it blew in making 5,000,000 feet of gas and 8,000 bbls. of fluid, 95 per cent salt water and 5 per cent oil. The well blew for an hour at that rate and went dead. Phillips company has charge of operations and has ordered an air jammer to the location.

Since the Simms Oil Co. and the Sun Oil Co.'s No. 1 Simmons, Section 9-18-13, about 5 miles north of No. 2 Cordell, blew in at 2,650 feet making 30,000,000 feet of gas and 20,000 bbls. of salt water believed to be coming from higher up the hole, operators in that area have been kept in a frenzy of excitement. No. 2 Cordell was next to cause its share of excitement.

"Bill" Walber, who has wildcatted in that territory for two years, sold out his interest in No. 2 Cordell with the first flurry of excitement. He received $50,000 cash and $50,000 in oil for his interest in the test and approximately 600 acres of wildcat acreage in that section. He sold to Garrett and Modisette Drilling Co., and James and King of El Dorado. A few days ago Phillips company bought a half interest in the holdings for a reported purchase price of $150,000 cash and assumed an interest in the first oil obligation to be paid. Phillips company will operate the property.

Lawson Area

Lawson is still a high-priced territory. Shaffer Oil & Refining Co. is reported to have paid $525 an acre for a 40-acre tract. The property purchased was the SW SE, Section 5-18-13, northwest of the Simms test. Simms and the Sun Oil Co.'s No. 1 Simmons topped the red shale at 2,895 feet and went into hard rock at 2,911 feet and Saturday morning it was drilling hard rock at 2,929 feet. Phillips company's No. 2 Cordell topped the Woodbine at 2,967 feet.

Offsetting No. 1 Simmons to the southwest, Natural Gas & Fuel Corp.'s No. 1 Cordell, Section 9-18-13, cored sand at 2,650-59 feet and is going on down to 2,700 feet. A casing seat was left at 2,641 feet.

Friday, Gilliland Oil Co. and Ramsey's No. 1-D Taylor, Section 14-23-8, exploring for Trinity production in the Haynesville Field, swabbed 34 bbls. of oil and 66 bbls. of salt water from 35 feet of broken formation at 4,513-48 feet. The test was swabbed all day Friday at intervals of every 40 minutes to one hour. Arrangements are being made to deepen.

Effective Thursday morning Standard Oil Co. of Louisiana cut Bellevue crude 10 cents making the new posted price for the oil $1.40 a barrel. Others buying Bellevue crude made similar reductions. This and the steady decrease in pipeline runs of Smackover crude caused operators to speculate on the change.

Since Spindletop started pouring its big output on the market, runs of lines going to Gulf Coast refineries from Smackover have been curtailed to some extent. The daily average pipeline movement of Smackover crude during August was 134,000 bbls., a decrease of 5,600 bbls. in the daily average compared to July pipeline runs. The gross movement of Smackover crude during August was 4,930,000 bbls. More than 1,580,000 bbls. of Lisbon and El Dorado crude was pumped from El Dorado stations during August.

Smackover Storage

Storage in Smackover was reduced 1,250,000 bbls. during August. More than 23,700,000 bbls. of Smackover crude is in storage there. Of that amount, 7,465,000 bbls. is in steel storage, 14,980,000 bbls. in earthen storage and 1,255,000 bbls. in field storage. Before the coming of severe weather another large slice of the earthen storage will be out of the pits. Pipeline companies and production companies are treating the pit oil as rapidly as they can and the bulk of the treated pit oil is going into the pipelines. A great deal of the pit oil is ready for pipeline shipments.

Since the first of the month pipeline runs have dropped again. No great drop, according to pipeline officials, but slightly less than the runs at the same time last month. Urania, in Louisiana, showed an increase in storage last month while in the preceding month that field had practically no storage. On August 1, there was 15,000 bbls. in steel storage and 30,000 bbls. of pipeline oil in field storage.

Natural Gas & Fuel Corp.'s No. 5-M Urania, Section 20-10-2e, furnished the feature of the week for the Urania Field when it blew in making 15,000,000 feet of gas and spraying oil. The well had sand at 1,584-88 feet and the drill stem was coming out of the hole when the well blew in knocking off the crown block. The well is being killed so the liner can be set and the well completed.

Most of the activity in Urania is in the south end of the field which is now being developed. Water encroachment in wells in that part of the field has always been serious and completions there are difficult.

Interesting in Caddo is the development of Woodbine production around Section 15-20-15, and chalk rock production around Section 31-21-15. In each Section, a 1,000-bbl. well has been recently completed in those producing horizons. Offset tests to those wells are now drilling and another chalk rock test should be completed by the end of next week. While interesting to operators in that district neither well caused any great demand for offset acreage. One independent operator with acreage a quarter of a mile away had three inquiries concerning his holdings but no offers.

The second well for the Georgetown area south and west of the Urania Field was completed last week by The Texas Company. It was good for 50 bbls. Gulf Refining Co. is testing the offset to its first well in Georgetown.

Twenty-two new wells gave the district 882 bbls. of new production last week, 10 in Arkansas good for 297 bbls. combined and 12 in Louisiana making 585 bbls. in the aggregate. Eight dry holes were drilled, two in Arkansas and six in Louisiana. Five gas wells, one in Arkansas and the others in Louisiana had a combined production of 54,000,000 feet of gas.

Week's Completions

Field operations changed little during the week save in the completion report. Thirty-six completions were made during the past week, while 56 were recorded for the previous seven-day period. Summarized there are 30 wells waiting on standard rigs, 229 tests drilling, 27 rigged, 56 derricks up and 17 locations.

Production of the district went off again during the week, lost 1,275 bbls. in daily average and threatens to go below 200,000 bbls. a day. Arkansas lost 1,780 bbls. in daily average while Louisiana gained 505 bbls. Smackover heavy accounted for 1,000 bbls. of Arkansas' loss while every field except El Dorado contributed to the fall. El Dorado gained only 5 bbls.

Urania gained principally for Louisiana. Its gain didn't come so much flush production as did from old wells that had been worked over and increased their output. Cotton Valley, DeSoto and Red River and Elm Grove made small gains and all other fields declined.

Production by Fields

	Bbls.
LOUISIANA	
Bellevue	2,675
Caddo, heavy	10,220
Caddo, light	2,955
Cotton Valley	7,300
DeSoto and Red River	4,200
Elm Grove	535
Haynesville	9,305
Homer	5,610
Urania	14,255
Total	56,455
ARKANSAS	
Smackover, heavy	119,310
Smackover, light	14,620
El Dorado	6,850
Lisbon	8,915
Nevada	1,980
Stephens	1,670
Total	152,445
Total both fields	208,900
Total last week	210,175
Difference	1,275

ARKANSAS
Union County

In the Smackover area and in semi-wildcat territory, H. L. Hunt's No. 1 Hammond, Section 27-16-16, 5 miles southwest of Smackover, was put on the beam at 2,689 feet. It is pumping 400 bbls. of fluid, 90 per cent of which is salt water. North of the test Hunt tore down the derrick and abandoned the location for No. 5 Swilley, Section 27-16-16. The only other Smackover completion was in the Norphlet sector when Keene & Woolf's No. 5 Murphy, Section 9-16-15, was finished in sand at 2,628-37 feet, pumping 12 bbls. of oil.

Six completions were added to Lisbon, one of which was a dry hole on the west side of the field. It was Lion Oil & Refining Co.'s No. 13-A Mitchell, Section 17-17-16, which was abandoned at 2,168 feet without a test. In the heart of the field Rovenger Oil Corp.'s No. 4 Graham, Section 16-17-16, was finished at 2,124-55 feet for a 15-bbl. pumper. Lisbon's remaining quartet of wells were completed in the south end of the field. Magnolia Petroleum Co.'s No. 3 Halsey, Section 20-17-16, is pumping 10 bbls. from 2,152 feet. Reynolds & Marr's No. 2 Mooty, Section 22-17-16, is pumping 15 bbls. from 2,132-79 feet. Imperial Oil & Gas Co.'s No. 1 Parker, Section 21-17-16, is good for 35 bbls. at 2,093 to 2,115 feet and its No. 4 Primm, Section 21-17-16, was a 30-bbl. pumper at 2,116-55 feet.

Field operations in Smackover showed a slight increase over the past week. G.

OTHER TESTS AND MORE LOCATIONS FOLLOW LAWSON WELL BLOWING IN

By James H. Dameron

EL DORADO, Ark., Sept. 20.—The Lawson area in Union County, Arkansas, again demanded the attention of Louisiana-Arkansas operators during the week when the Walber test, No. 2 Cordell, Section 6-19-13, blew in from 2,984 feet making 5,000,000 feet of gas and 8,000 bbls. of fluid, 95 per cent salt water and 5 per cent oil. The oil was high in gravity. Two other tests, Natural Gas & Fuel Corp.'s No. 1 Cordell, Section 9-18-13, and Simms and Sun Oil Co.'s No. 1 Simmons, same section, are being followed with interest. Another test is starting up and locations have been made for others in the Lawson area.

Gilliland Oil Co.'s and Ramsey's deep test in the Haynesville Field clouded the hopes of operators for deep production there when the well began showing a big batch of salt water which was choking out the oil showing. The Georgetown area in Louisiana got a little flurry of excitement when The Texas Company completed a 50-bbl. wildcat. Three wildcat gas wells were completed in De Soto Parish. They had been drilled in several weeks but never officially completed. Along the Caldwell-Angelina flexure it was the same old story—more dry holes.

ARKANSAS
Union County

Grimes & Jones' No. 1 Prothro, Section 3-18-15, is waiting for casing to set at 2,530 feet. Imperial Oil & Gas Co.'s No. 1 Goodwin, Section 26-17-16, tested salt water at 2,973-82 feet and arrangements are being made to core at 2,984 feet. In the Lawson area Marine Oil Co. has staked a location for No. 1 Thompson, NW SW NE, Section 10-18-13, offsetting Simms and Sun Oil Co.'s No. 1 Simmons to the east. Natural Gas Fuel Corp.'s No. 1 Cordell, NE SW NW SE, Section 9-18-13, a diagonal southwest offset to No. 1 Simmons, cored salty sandy shale at 2,507-11 feet. No. 1 Simmons is drilling at 2,768 feet. Ten miles to the east Peer Oil Corp. is rigging up No. 1 Hollis, NE NW SW, Section 36-18-12. Matthews and associates' No. 1 Lewis, Section 14-19-12, is waiting for casing to set at 2,650 feet. Thorpe and associates' No. 1 Peck, Section 22-18-13, is a derrick. The Walber test, now Phillips Petroleum Co. and associates' No. 2 Cordell, Section 6-19-13, sanded up after blowing in and is to be put on the swab. East of Dilolo Wingfield and associates' No. 1 McGough, Section 22-17-13, is drilling at 1,940 feet.

Ashley County

Rhodes & Kirker's No. 1 Bledsoe, Section 20-15-7, is drilling at 2,800 feet.

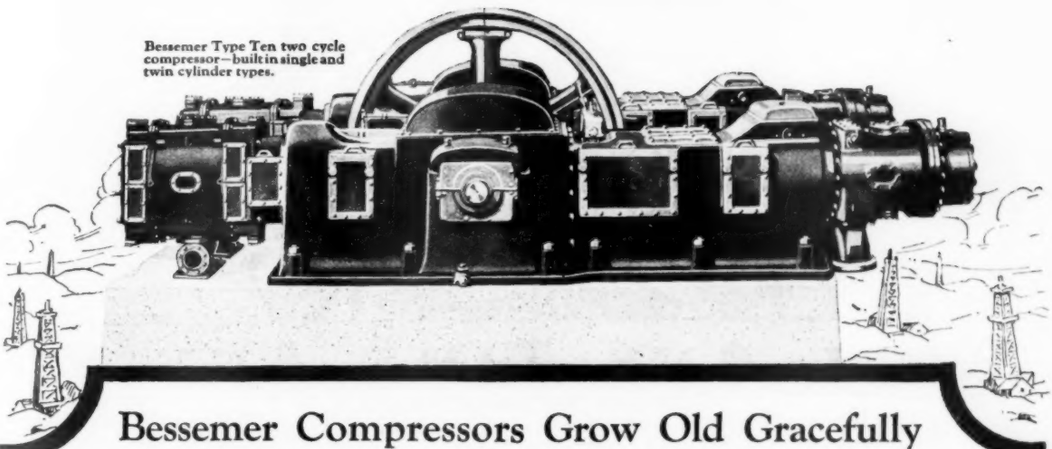
Bradley County

Magnolia Petroleum Co.'s No. 1 Arkansas Timber, Section 33-15-11, is drilling at 2,700 feet. McMurry and associates' No. 1 Southern, Section 7-15-11, is coring at 3,190 feet. Wingfield and associates' No. 1 Southern, Section 2-16-12, is drilling at 2,589 feet. Phillips Petroleum Co.'s No. 1 Southern, Section 36-16-11, is being rigged.

Calhoun County

Delmar Oil Co.'s No. 1 Guidor, Section 16-11-14, is shut down at 2,233 feet for boiler repairs.

(Continued on Page 126)



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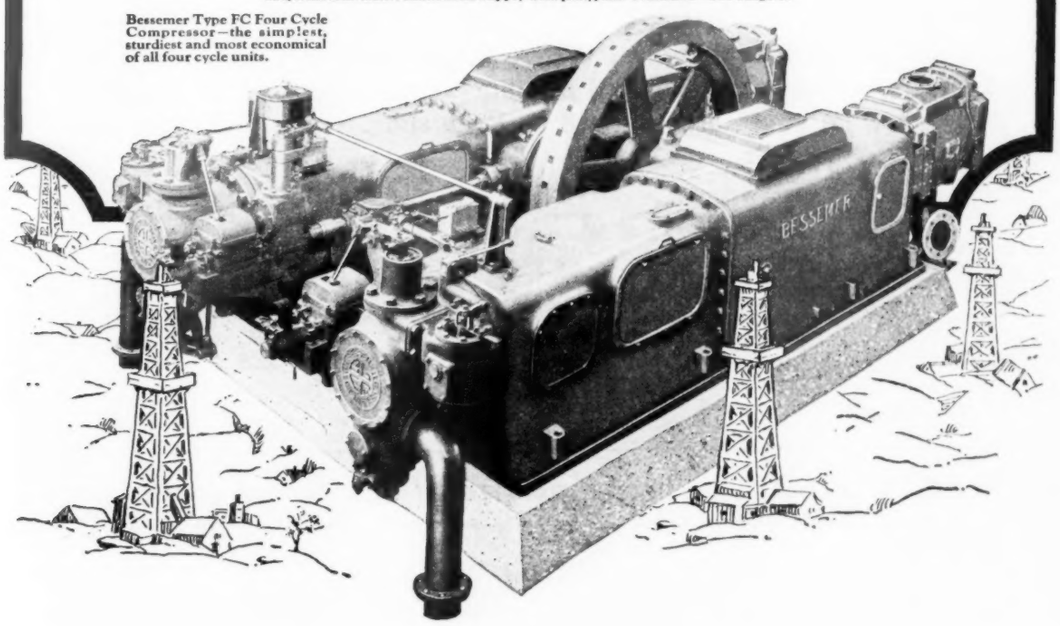

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J. Childs' No. 3 fee, SW cor. NE SE, Section 8-16-16, is a rig. Gladys Belle Oil Co.'s No. 5-A Cook, Section 16-16-15, has 1,000 feet of oil in the hole from sand at 2,618-30 feet and is waiting for a standard rig. A derrick is up for same company's No. 9 Cook, 400 feet south and 200 feet west NE cor. SE NE, Section 16-16-15. Grimes & Jones' No. 10 Van Hook, Section 8-18-14, is a rig. Gulf Refining Co.'s No. 41 Hardy-Murphy, Section 4-16-15, is being bailed to test at 2,348-62 feet; No. 42 is drilling at 1,395 feet and location was made for No. 43 Hardy-Murphy, 1,120 feet west and 660 feet north SE cor. Section 4-16-15. Gulf company's No. 48 L. Werne, Section 6-16-16, is drilling at 890 feet. F. C. Henderson's No. 3 Smith, Section 18-16-15, was cemented back to 2,640 feet and is drilling at 2,788 feet. Hollayfield and associates' No. 13 Giller, Section 10-16-15, is being bailed to test at 2,006 feet. Arrangements are being made to produce Lion Oil & Refining Co.'s No. 10 Graves, Section 3-16-15, with compressed air. The test had sand at 2,667-73 feet making 5,000,000 feet of gas and 75 bbls. of oil and then went dead.

Magnolia's Operations

Magnolia Petroleum Co.'s No. 2 Freeman, SE cor. NE SW, Section 7-16-16, is a derrick pattern. Eight and one-quarter inch casing was cemented at 2,587 feet at Magnolia Petroleum Co.'s No. 3 Childs, Section 8-16-16. A derrick is up for Magnolia Petroleum Co.'s No. 4 Hessler, SW cor. NW NE, Section 8-16-16, and No. 1 Murphy, Section 28-16-16, is drilling at 2,650 feet. Magnolia Petroleum Co.'s No. 2 Scott, Section 12-16-17, had sand at 2,250-62 feet and is waiting for a standard rig. Location was staked for Marine Oil Co.'s No. 1 Thompson, NW cor. SW NE, Section 10-18-13. Murdock and associates' No. 4 Hays, Section 4-16-15, is drilling at 2,460 feet. Pure Oil Co.'s No. 7 Bilyew, Section 8-16-15, is drilling at 1,633 feet. Simms Oil Co.'s No. 12 Cook, Section 16-16-15, is drilling at 865 feet.

Simms Oil Co.'s No. 1 Matthews, Section 34-16-16, has 1,100 feet of oil in the hole from sand at 2,081 to 2,111 feet and is waiting for a standard rig. Six-inch casing was cemented at 2,667 feet at Southern Crude Oil Purchasing Co.'s No. 10 Graves, Section 3-16-15, and at 2,585 feet at No. 5-A Wells, Section 15-16-15. Standard Oil Co.'s No. 4 Reynolds, Section 6-18-15, is bailing sand 5 feet off bottom at 2,182 feet, and No. 37 Hardy, Section 9-16-15, is drilling rock at 150 feet. At Sunny Jim Oil Co.'s No. 3 Flenniken, Section 9-16-15, 2,494 feet of 4½-inch casing was pulled and the hole cemented back to 2,484 feet. The Texas Company's No. 8 Calloway, Section 4-16-15, is being cored at 2,349 feet; 6-inch was cemented at 2,350 feet at No. 8 Hays, Section 4-16-15.

Lisbon Area

In the Lisbon area Atlantic company's No. 4 Ford, Section 3-17-16, has 300 feet of oil in the hole from sand at 2,115-40 feet and is waiting for a standard rig. Gulf company's No. 1-A Slaughter, 1,120 feet south and east NW cor. Section 20-17-16, is a rig. Humble Oil & Refining Co.'s No. 1 Snyder, Section 21-17-16, is a rig; 6-inch casing was cemented at 2,120 feet at No. 2 Goodwin. Section 20-17-16. Surface casing was set at 104 feet at Imperial Oil & Gas Co.'s No. 2 Parker, Section 21-17-16; surface casing was set at 111 feet at No. 3 Parker, SW cor. SE NW, and No. 4 Parker, SE cor. SE NW, is a rig. Six-inch casing was cemented at 2,090 feet at Lion Oil & Refining Co.'s No. 17-A Mitchell, Section 17-17-16. Magnolia Petroleum Co.'s No. 4 Halsey, Section 20-17-16, has 800 feet of oil in the hole from sand at 2,132-64 feet and is waiting for a standard rig; 6-inch was cemented at 2,134 feet at No. 5 Halsey and a derrick is up for No. 6 Halsey, NW cor. NW NE. Section 20-17-16. Two-inch tubing with a packer is being set at Magnolia Petroleum Co.'s No. 2 Slaughter. Section 17-17-16, which had sand at 2,097 to 2,138 feet.

Ohio Oil Co.'s No. 1 Stocks, Section 21-17-16, had sand at 2,140-59 feet and is waiting for a standard rig. Reynolds & Marr's No. 4 Goodwin, Section 21-17-16, is a rig. Rovenger Oil Corp.'s No. 4-B Goodwin, Section 16-17-16, has 300 feet of oil in the hole from sand at 2,106-24 feet and is waiting for a standard rig; No. 5 Graham, same section, is drilling at 1,315 feet. Roxana Petroleum Corp.'s No. 3 Willett, Section 3-17-16, has 300 feet of oil in the hole from sand at 2,080 to 2,100 feet and is waiting for a standard rig; 6-inch was cemented at 2,060 feet at No. 4. Six-inch was cemented at 2,070 feet at Southern company's No. 5-B Slaughter, Section 3-17-16; No. 6-B is a derrick. In the southern end of the field, Unity Petroleum Co. has four tests drilling for the Lisbon pay and seeking to extend production: No. 1 Snydor, Section 21-17-16, is drilling at 1,990 feet; No. 2 at 630 feet; No. 3 at 1,530 feet, and No. 4 at 1,120 feet.

Ouachita County

Another deep failure was charged against Smackover when the Gulf Refining Co.'s No. 20-A Umsted. Section 33-15-15, was dry and abandoned at 3,105 feet. Sun Oil Co.'s No. 2 Hardin, Section 22-15-16. was completed at 2,268-71 feet making 40 bbls. on the swab. Woodley Petroleum Co.'s No. 5 Richardson, Section 29-15-15. is pumping 50 bbls. from 9 feet of sand topped at 2,630 feet. In the Stephens district Louisiana Oil Refining Corp.'s No. 1 Holton, Section 15-15-19. was completed at 1,544 feet as a 20,000,000-foot gas well.

Copenhaven and associates' No. 2 Berg, Section 13-15-17, is bailing to test 122 feet of broken formation at 2,187 to 2,309 feet. Gulf company's No. 12 Goodwin, Section 32-15-15, is drilling at 1,220 feet; No. 22-A Umsted, Section 33-15-15, is drilling at 700 feet and a rig is up for No. 23-A Umsted, 1,120 feet south and 660 feet east center Section 33-15-15. Humble Oil & Refining Co.'s No. 10 Hildebrant, Section 28-15-15, has 450 feet of fluid in the hole from sand at 2,591-96 feet and is waiting for a standard rig. W. R. Keever's No. 2 Neeley, Section 27-15-16, was dry in sand at 1,969 to 2,046 feet and 5⅞-inch casing was cemented at 2,269 feet to test another formation. Lion Oil & Refining Co.'s No. 5 Hays, Section 4-16-15, is drilling at 1,060 feet. A. Meek's No. 3 Clawson, Section 35-15-17, is drilling at 1,430 feet and a derrick is up for his No. 8 Hughes, SW cor. NW NE, Section 28-15-16. The lease was formerly Galloway Oil Co.'s Hughes lease.

Phillips Petroleum Co.'s No. 1 Tate, Section 9-14-17, is being delayed while four joints of 8-inch casing is being fished out at 3,132 feet. Casing was set at 1,860 feet and J. D. Reynolds' No. 3 Ratch & Cartier, Section 2-14-18, tested salt water with a show of oil at 1,872-92 feet. The hole is being plugged back to 1,473 feet. Roxana Petroleum Corp.'s No. 7 Berg, Section 28-15-15, is drilling at 2,540 feet. Standard Oil Co.'s No. 11-B Murphy, Section 28-15-15, drilled the plug at 2,610 feet and is drilling hard sand at 2,612 feet. A 5⅞-inch hole is being reamed down to 2,540 feet at Standard Oil Co.'s No. 7-B Umsted, Section 32-15-15.

Casing cemented at 2,339 feet is being bailed at Sure Oil Co.'s No. 4 Snydor, Section 34-15-15. The Texas Company's No. 8 Neeley, Section 27-15-16, has 800 feet of oil in the hole from sand at 2,208-48 feet and is being bailed. In the Stephens district Magnolia Petroleum Co. set 10-inch casing at 102 feet at No. 6 Watson, Section 31-15-19. Six-inch casing was cemented at 2,127 feet at Ohio Oil Co.'s No. 5 T. Hall, Section 31-15-19.

Columbia County

Six-inch was cemented at 2,200 feet at Gorden and associates' No. 8 Jones, Section 36-15-20. A rig is up for Haynes and associates' No. 1 Runyon, 660 feet north and 330 feet east SW cor. Section 3-16-21.

Nevada County

Bemis and associates' No. 1 Ellis, Section 2-14-21, is pumping 50 bbls. from sand at 1,132-41 feet. Humble Oil & Refining Co.'s No. 4 Bodeau, Section 10-14-21, is drilling in lime at 2,802 feet. Six-inch casing was cemented at 1,128 feet at Humble company's No. 2-B Groves, Section 1-14-21. and a derrick is up for No. 2-C Groves, SE cor. SE, Section 1-14-21. Six-inch casing was cemented at 1,148 feet at Wright Oil Co.'s No. 1 Groves, Section 12-14-21.

LOUISIANA

Bossier Parish

In the Bellevue Field, Autrey Oil Co.'s No. 5 Connell, Section 15-19-11, was dry and abandoned at 467 feet. In Elm Grove Palmer Crop. cemented 6-inch casing at 1,854 feet at No. 1 Hunter, Section 13-16-12, formerly Atlas Oil Co.'s No. 1. Arrangements are being made to set 6-inch casing at 386 feet at George W. Wetherbee's No. 13-F fee, Section 23-19-11.

Caddo Parish

Five oil wells were completed in Caddo Parish last week. W. D. Chew's No. 5 State, Section 34-21-16, is pumping 40 bbls. from 1,828 feet. Gulf Refining Co.'s No. 248 Ferry Lake, Section 15-20-16, is flowing 15 bbls. through 2-inch tubing from 2,265 feet. No. 251 Ferry Lake was completed at 2,260 feet making 3,000,000 feet of gas and 75 bbls. of oil. Gulf company's No. 7-U Levee Board, Section 16-20-16, is flowing 85 bbls. through tubing from 2,286 feet. The Texas Company's No. 54 S. P. Harrell, Section 4-21-16, is making 20 bbls. on the pump from 2,395 feet. Plans to work over Magnolia Petroleum Co.'s No. 10 Robertshaw, Section 23-21-15, which was completed at 3,610 feet as a gas well, were changed and the status of the well will not be changed.

Dixie Oil Co. is still drilling with no definite depth to stop at No. 1 Jolly, Section 27-22-15, and is going through broken lime at 4,338 feet. Gulf company's No. 1 J. M. Byrd, Section 2-19-14, is being delayed while the drilling stem is fished out at 3,840 feet. Six-inch casing was cemented at 3,578 feet at Magnolia Petroleum Co.'s No .16 Dillon, Section 24-21-15, and 6-inch was cemented at 3,588 feet at No. 17 Dillon. Magnolia Petroleum Co.'s No. 1 Spell, Section 29-21-15, is fishing at 3,552 feet. Magnolia Petroleum Co.'s No. 1 Bradford, Section 24-21-15, is drilling in lime and shale at 3,854 feet. The Texas Company is resetting 5⅞-inch casing at 3,751 feet at No. 42 C. M. L. Co., Section 23-21-15.

Surface casing was set at 60 feet at Dixie Oil Co.'s No. 18 Muslow, Section 18-20-15. Same company's No. 79 Robertshaw, Section 14-21-15, is drilling shale at 1,380 feet, and No. 10 Slattery, Section 27-21-15, is drilling shale and boulders at 2,140 feet. Gilliam Syndicate is arranging to test at 1,650 feet at No. 1 Sellington, Section 17-21-14. A derrick is up for Golden Flood Oil Co.'s No. 2 Atkins, 1,164 feet north and 78 feet east SW cor. SE, Section 31-21-15. On the Gulf's Ferry Lake lease No. 249 is waiting for a pumping rig; No. 252 has spudded; No. 253 is drilling at 1,508 feet; No. 254 has spudded; No. 255 is drilling at 570 feet; No. 256 is being rigged; No. 257 is drilling at 900 feet. Location was made for the Gulf company's No. 8-U Levee Board, 2962 feet west and 1,855 feet south NE cor. Section 16-20-16. Lewis Oil Corp.'s No. 8 Vespy, Section 15-21-15, is drilling at 1,200 feet. Location has been made for Magnolia Petroleum Co.'s No. 1 Wemple, Section 14-20-15. Murphy and associates' No. 1 Youree, SE NE NE, Section 13-20-15, is drilling at 615 feet.

Ohio Oil Co.'s No. 20 E. K. Smith, Section 12-21-15, is waiting for a standard rig at 1,600 feet; No. 21 is waiting for a standard rig at 1,644 feet and a derrick is up for No. 22 Smith, 575 feet south and 1,102 feet east NW cor. SW, Section 7-21-14. Radio Oil Corp.'s No. 3 Louisiana Oil Co. fee, Section 31-21-15, is drilling at 1,350 feet. Superior Oil Co.'s No. 3 Youree. Section 26-20-15, is waiting for a standard rig at 2,305 feet; No. 4 is waiting for a standard rig at 2,290 feet and No. 5 is a derrick.

On The Texas Company's leases, No. 64 Caddo Levee Board, Section 33-21-16, is waiting for a standard rig at 1,824 feet; 6-inch was cemented at 826 feet at No. 1-B Caddo L. B., Section 22-15-12; No. 40 C. M. L. Co., Section 23-21-15, is drilling sandy shale at 2,268 feet; a rig is up for No. 1 Curtis, NW cor. SW, Section 14-20-16; the plug at 2,259 feet is being drilled with cable tools at No. 3 Perry, Section 3-20-16; 6-inch casing was cemented at 2,251 feet at No. 12 Russell, Section 3-20-16. The liner is being set at 1,545 feet to test at Thomason and associates' No. 2 Muslow fee, Section 31-21-15, and No. 3, is a derrick. Unity Petroleum Co.'s No. 1 Crystal fee, Section 13-21-16, is waiting for a standard rig at 1,055 feet; No. 2 Crystal fee, Section 24-21-16, is to be abandoned at 1,250 feet; 6-inch was ce-

(Continued on Page 122)

SKELLY WELL WEST OF MALJAMAR EXPECTED TO INCREASE FROM 40 BBLS.

By Special Correspondent

ARTESIA, N. Mex., Sept. 18.—A test is now being made of the Skelly Oil Co.'s No. 1 well on the Lynch permit, Section 22-17-31, which has extended the Maljamar Pool 5 miles to the west of the discovery well. Casing has been set at 3,407 feet, and the well for the past week has been flowing at the rate of 40 bbls. daily. This production is expected to increase when the pay is drilled out, as it has only been penetrated a depth of 4 feet.

South of the Skelly well, Bruce Sullivan's No. 1 test on the Lodewick permit in Section 1-18-31 has picked up a small amount of salt water below 2,500 feet. This will be eased off and the hole carried down to the Maljamar pay.

The Prairie Oil & Gas Co. has closed a contract for a well on a Government permit in the NE of the NE of Section 34-18-32. The Prairie is now one of the largest owners of acreage in Lea County.

Henderson-Dexter-Blair has started drilling on No. 1 Wyatt well in the SW quarter of Section 34-17-33, the hole being down 200 feet. This is a joint venture with The Texas Company, approximately 50,000 acres being involved.

West of the Maljamar, good time is being made by the Ohio Oil Co. on No. 1 on the Wm. Mitchell permit in Section 18-17-32. The Maljamar well on the Grace Mitchell permit in Section 5-17-32 has a fishing job at 600 feet.

A well that is attracting the attention of major companies is the Cap Rock Oil & Gas Corp.'s No. 1 in Section 11-16-32, this being in a northeast trend from the Skelly. Protection acreage has been purchased by the majority of the big companies around this test, including the Empire, Humble, Ohio, Mid-West and The Texas Company. The Empire has also purchased 800 acres checkerboarded in the southeastern part of the state.

South of the Cap Rock well, Englefield & Bridges are setting casing in No. 1 in the SE quarter of Section 4-17-34 at a depth of 1,380 feet.

In the Artesia Pool, Snowden & McSweeney & McNutt have put their No. 8 well in Section 21-18-28 on production, this being good for 30 bbls.

Phillips & Welch are shooting No. 1 in the NW quarter of Section 35-17-28 from 2,670-88 feet. The total depth of this hole is 2,708 feet.

The Empire Oil & Gas Co. has made a location on state acreage in the NW quarter of Section 2-18-27, offsetting its No. 1 producer to the south. This latter is making 35 bbls. daily from 1,604 feet.

The Toomie-Allen sand has been encountered in the Hasenfuss & Donley No. 2 well in the NE quarter of Section 13-18-27 at a depth of 2,646 feet. A fishing job has delayed completion.

Eddy County

Compton et al's No. 2 Mann permit,

(Continued on Page 127)

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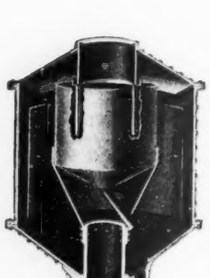

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Deep Zone In Huntington Extension

Wilshire Well Doing 500 Bbls. Daily in Hitherto Undeveloped Sand to Result in Starting of Additional Tests

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Sept. 18.—The development of interest in California during the past week was the successful completion of the Wilshire Oil Co.'s No. 1 Huntington doing 1,500 bbls. a day from a heretofore undeveloped deep zone in the southwest extension of the Huntington Beach Field. Its importance lies in the fact that it will prove a powerful stimulant and not only hasten present development work but result in the starting of additional holes immediately. While the Wilshire was the first company to tap the deep zone in the southwest extension, this sand has been producing for a year or so on the Standard's lease "B" north of the town lot area. The existence of this sand in the extension has been appreciated for several months and, while the Wilshire's completion did not come as a surprise to well-informed operators, the initial output was somewhat larger than anticipated, as a 750-bbl. well would have exceeded expectations.

It is hardly necessary to say that some fast drilling will be staged during the next 60 days, and the statement made several weeks ago that the extension would be doing better than 10,000 bbls. a day before the close of the current year now appears to be very conservative, as it is estimated there should be at least 15 or 20 wells finished in the deep horizon previous to January 1. There are 22 derricks standing in the extension in addition to the 51 wells already under way, and as practically none of the operators will stop in the upper Superior sand, we can anticipate some fast drilling from now on.

E. J. Miley is expected to drill into the deep sand some time during the next week as his No. 2 Pacific Electric has just passed the 3,650-foot level. Nos. 3 and 4 should follow this well into production within a short time and, although Nos. 5 and 6 are just being rigged up, they will be pushed ahead with all possible speed now that the existence of a deep sand has been definitely determined. The Superior, Standard, Julian Petroleum, McKeon Oil Co., George F. Getty and the Petroleum Securities are also making preparations to drill direct to the lower sand and, since these six companies are running something like 40 strings of tools and have tentatively located an additional 25 wells their operations alone will be a vital factor in future production.

Operators fairly radiated their enthusiasm as the news spread around the field that the Wilshire had definitely proven up the deep zone and one could not help but appreciate their optimism as developments in the upper sand during the past few weeks did not appear any too favorable. The Standard finished two new producers in the extension in the week but, as the output in the Superior sand is only comparatively small, it is believed both will be started down to the deep zone within 10 days. These two new wells, which were put on the beam previous to the completion of the Wilshire's deep well, were No. 1 Huntington, good for 140 bbls. from 3,084 feet, and No. 2 Huntington, pumping 120 bbls. from 3,069 feet.

Ventura

Daily production in the Ventura Avenue Field was given another substantial boost as a result of the completion of the Shell's No. 13 Taylor which came in flowing 2,850 bbls. of 29.8 gravity oil and 5,000,000 feet of gas from 5,910 feet. The Shell has several other wells coming along, four of which should be on production within 30 days. The Bolsa Chica has just cemented a string of 11-inch in No. 2 Hartman at 3,564 feet and has killed No. 1 preliminary to deepening it from 5,434 feet to around 6,000 feet in the hope of stimulating production. The company's initial well on this lease has been flowing approximately 500 bbls. a day since completion and it is thought the addition of another 500 or 600 feet of hole will boost the output around 1,000 bbls. daily.

The Associated will undoubtedly establish a new deep production record, as far as the Ventura Avenue Field is concerned, within two weeks, as No. 33 Lloyd is expected to go on production from about the 6,300-foot level. The well is down 6,200 feet and gives evidence of substantial production. That the gas head is apparently passing off in the Ventura Avenue Field is evidenced by the fact that operators are now able to drill down below the 6,000-foot level, an impossibility a few months ago, because wells blew in previous to reaching this depth. One should not get the impression, however, that any shortage of gas is imminent or anticipated in this area for some time but considerably less trouble is being experienced than in the past when operators were unable to drill down below 5,000 or 5,500 feet due to the heavy gas pressure encountered around that depth.

Not a single well in the field has yet been drilled entirely through the deep sand and hence no information is available as to the thickness of the producing formation which may extend below 7,000 feet. The Associated, Shell and General Petroleum should finish something like 15 or 20 wells in the Ventura Avenue Field during the next three or four months and, due to the numerous locations available and rigs standing, these three concerns will undoubtedly continue to develop their respective holdings until the various properties have been adequately protected as far as drainage is concerned. Neither No. 1 Orton nor No. 1 Willett of the Petroleum Securities showed any improvement with the additional hole made during the week but it is expected the latter will begin showing up within a few weeks if it is destined to secure commercial production.

Long Beach

There were no wells finished in the Long Beach Field although there were several medicore producers recompleted after being redrilled and deepened from the upper to the lower horizon. The largest well finished, from a production standpoint, was Craigen & Gray's No. 1 Cerritos, a former top zone producer, which has just been put on the beam in the lower sand at 4,820 feet. This well registered an initial of 250 bbls. daily but the output is showing a rather high cut ranging from 15 to 20 per cent. The Henderson Petroleum's No. 24 Cerritos, another recompletion after being deepened, is pumping 168 bbls. of 20.9 gravity oil from 4,824 feet, the hole having been finished with a 4½-inch perforated liner. Keck & McWhorter's No. 2 Cerritos started off pumping 140 bbls. from 4,816 feet but the production is cutting approximately 20 per cent. The Ring Petroleum is also experiencing considerable difficulty with water as the output of its No. 1 Grant, 178 bbls. daily, carried down to 4,820 feet and later plugged back to 4,765 feet, is cutting around 35 per cent water.

The Julian Petroleum's No. 1 Castle, although it only registered a comparatively small initial, was one of the few wells finished in the northwest extension during the week which did not show an excessive water content. The output upon recompletion at 4,850 feet was 122 bbls., the oil testing 21.5 degrees and showing a cut of 1 per cent. No. 22 Cerritos of the Craig-Burns Oil Co. is pumping 82 bbls. from 4,830 feet, the oil testing 22.1 degrees and showing a cut of 4 per cent. Walter P. Temple, who is drilling a deep test in the extension in search of a third productive horizon, has landed a string of 4⅝-inch in his No. 5 Cerritos at 5,645 feet preliminary to making a production test and, while some favorable indications have been noted, it is a rather long shot. The General Petroleum's No. 7 K. & H. in the older section is showing up unusually favorable and, with approximately 750 feet of oil-bearing formation from which to draw, the outlook is quite promising for a good well when a test is made within a few days from 5,100 feet.

Rosecrans

The Barnsdall chalked up another good well in the Rosecrans Field early in the week when No. 13 O'Dea came into production doing 420 bbls. of 30.1 gravity oil daily from 4,980 feet. No. 14 O'Dea on the same lease was given a preliminary production test from 4,681 feet but when it failed to flow the tubing was pulled and drilling resumed. This well will probably be finished within two or three weeks and should prove as good a well as No. 13 which is about 300 feet deeper. In addition to two workovers, the Union is drilling three new wells on the Howard Park property, in which the Barnsdall has a production interest, and, judging by present indications, one of the three drillers, No. 27 Howard Park, should be listed for completion within two weeks. In the eastern part of the field, where Fred Cole recently finished a satisfactory completion, two new wells are being rigged up preparatory for an early spud and it seems probable both Cole's No. 2 Athens and the General Petroleum's No. 4 Vaughn will be spudded in simultaneously within a few days. The Julian Petroleum's No. 1

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well, Location—	S-T-R	Depth	Status
Union, No. 1 Bryant, Seal Beach	2- 5-12	5,350	br. sh. drilling
Marine, No. 1 Strong, Bellflower	24- 3-12	4,708	gr. sd. drilling
Feather & Preston, No. 1 Bline, Clearwater	16- 3-12	3,803	fishing
Union, No. 1 Howland, El Segundo	24- 2-15	5,197	sd. sh. drilling
Smith Pet. Co., No. 1 Johnson, Hawthorne	17- 3-14	4,296	hd. sd. drilling
Associated, No. 1 Cypress, Inglewood	34- 2-14	3,577	sh. gr. sd. drlg.
Dominguez Exten., No. 1 Compton, Dominguez	27- 3-13	Rig	rigging up
Riner, H. E., No. 3 McDermott, San Bernardino	32- 2- 8	205	hd. sd. drilling
Julian, No. 1 Trust, Manhattan	19- 3-14	5,741	to abandon
Milham Explts., Well No. 2, Del Rey	34- 2-15	6,058	fishing
Barnsdall, No. 1 Merlo, Puente	35- 1-11	4,498	sd. sh. drilling
Petroleum Sec., No. 1 Sesnon, San Fernando	14- 2-16	3,700	sd. sh. drilling
Standard, No. 1 University, San Fernando	15- 2-15	3,930	hd. sd. drilling
Standard, No. 1 Austin, Topango	11- 1-17	1,547	hd. sd. drilling
Union, No. 1 Saugus, Saugus	15- 4-16	3,817	fishing
Union, No. 2 Olinda, Orange Co.	10- 3- 9	5,325	unfavorable
Oceanside Oil Co., No. 1 Pacific, San Diego	23-11- 5	2,096	hd. sd. drilling
Halfhill Packing Co., No. 2 Jeffries, Burbank	2- 1-15	1,250	suspended
So. Calif. Drlg. Co., No. 1 Matteson, El Segundo	1- 3-15	Rig	rigging
Calif. Pet. Dev., No. 1 Spitz, Capistrano	2- 8- 8	2,096	gr. sd. drilling
Petroleum Sec., No. 1 De Baker, Bandini	18- 2-12	Rig	rigging
Van Nuys, No. 1 Community, Van Nuys		3,701	cemented
Julian, No. 1 Mosier, Athens	12- 3-14	Rig	promising area

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Union, No. 2 Theta, Kern County	23-28-20	2,040	survey hole
Taylor, W. W., No. 1 Clovis, Fresno County	5-13-22	1,246	hd. sd. drilling
Associated, No. 2 Huron, Fresno County	20-19-17	980	hd. sd. drilling
Federal Explts., No. 1 Kinsella, Tulare Co.	15-22-24	2,164	bl. sh. drilling
Bolsa Chica, Well No. 1, Kettleman	30-23-19	2,360	bld. 50 bbls. oil
Marland, No. 1 Elliott, Kettleman	12-22-17	5,570	fishing
South Coalinga, Well No. 1, Kettleman	35-24-19	1,377	bl. sh. drilling
Shell, No. 1 Berlywood, Moorpark	32- 3-20	6,260	unfavorable
C. C. M. O., No. 1 Hobson, Ventura Co.	22- 3-24	5,855	bad fishing job
Milham Explts., No. 1 Sexton, Ventura Co.	19- 3-22	6,017	set 6¼-inch
Milham Explts., No. 1 Buttonwillow, Kern	8-28-23	Rig	rigging up
Standard, No. 1 Palmer, Santa Barbara	13- 9-23	2,845	hd. sd. drilling
Standard, No. 1 Camarillo, Ventura Co.		2,515	conglom. drlg.
Standard, No. 1 McGrath, Ventura Co.	18- 2-22	2,140	survey hole
Pan American, No. 1 White, Monterey Co.	27-23-13	2,494	hd. sd. drilling
Pyramid, No. 1 Trescony, Monterey C o.	26-21- 9	2,770	fishing
Shell, No. 1 Murphy, Petaluma	29- 5- 6	2,549	hd. sd. drilling
Miley Explts., No. 2 Casitas, Ventura Co.	7- 3-25	604	fishing
Miley Explts., No. 1 Goleta, Santa Barbara	3- 4-29		location
Rio Grande, No. 1 Canet, Ventura Co.	9- 3-23	1,735	fishing
Sentinel, No. 1 Tejon, Ventura Co.	5- 5-17	562	suspended
Woodward & Sheedy, No. 1 Famosa, Kern Co.	29-27-26	Rig	rigging up
Henderson Pet., No. 2 Piru, Ventura Co.		765	hd. sd. drilling
Ozena, No. 1 Allensworth, Tulare Co.	26-24 24	104	sd. drilling
Union, No. 1 Gill, Famosa	8-28-27	Rig	rigging up

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This week	Daily Average	Total Last week	Daily Average	This year To date	Same time Last year
Crude oil	174,922	24,989	154,956	22,136	8,692,651	11,256,129
Fuel and gas oil			703,013	100,430	7,424,445	237,873
Gasoline	269,605	29,943	245,077	35,011	5,227,014	6,026,772
Tops					74,619	484,650
Coastwise—						
Crude oil	446,874	63,839	420,819	60,117	16,584,492	22,982,738
Fuel and gas oil	111,121	15,874	83,064	11,866	7,773,288	8,124,024
Gasoline	181,951	25,993	267,707	36,815	5,397,979	3,424,605
Kerosene	19,168	2,738	4,377	625	194,209	244,136
Tops					620,124	128,986
Exports—						
Crude oil	64,982	9,283	156,024	22,289	3,983,642	1,786,864
Fuel and gas oil	271,619	38,803	656,263	93,752	12,827,681	10,983,955
Gasoline			50,831	7,262	3,649,533	2,942,523
Tops	96,552	13,793			96,552	170,467
Kerosene			20,177	2,882	1,760,110	1,737,711
TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS						
Fuel and gas oil			145,674	20,811	1,104,624	218,414
Gasoline			72,986	10,427	758,222	1,036,369
Tops					229,775	794,918
Lubricants					275,617	235,533
Coastwise—						
Fuel and gas oil	72,994	10,428	48,715	6,959	3,077,530	2,506,514
Gasoline	28,187	4,027	35,955	5,136	3,211,202	1,879,975
Kerosene			1,969	281	276,582	143,822
Exports—						
Fuel and gas oil	125,572	17,939	64,627	9,232	2,481,250	1,775,375
Gasoline					1,166,681	459,361
Kerosene					1,462,561	723,316
Lubricants					8,759	243,429

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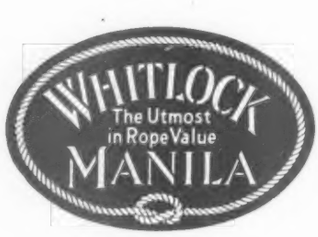

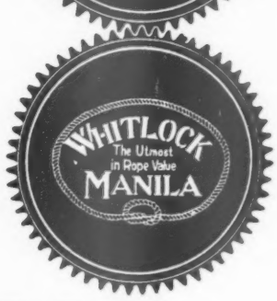

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Mosier, an outpost west of the northern part of the field, is one of the most interesting drilling projects in this area, although some are inclined to believe the test is not justified since it is out of line with the axis of the Rosecrans Field. The well, located in Section 12-3-14, is approximately 2 miles south of the Union's No. 1 Anderson and the Pan American's No. 1 Anderson, neither of which was carried down sufficiently deep enough to prove conclusive tests. The Pan American's No. 2 Anderson, abandoned as a duster early this year at 6,119 feet, is a little less than a mile northwest of the Julian's present test.

Inglewood

There has not been any concerted action taken by operators in the Inglewood Field toward stimulating production by the use of compressors, gas lifts or other improved methods of production and for this reason the success which the Shell attained when No. 5 Rindge was put on a compressor is particularly interesting. This well has been averaging around 200 bbls. a day for several months but when put on a compressor early this week increased its output to 470 bbls., the oil remaining clean and teesting 25.8 degrees. There were two recompletions listed in this area one by the Standard and the other by the Brownmoor Oil Co. The latter's well was No. 3, which was cleaned out and returned to production pumping 140 bbls. from 2,575 feet. The Standard returned No. 10 on Vickers Lease No. 1 to production after cleaning it out to bottom, 2,600 feet, and it is pumping 145 bbls., the oil testing 21.2 degrees and showing a cut of 3 per cent.

The General Petroleum finished another fairly good producer in the Santa Fe Springs Field when No. 24 Santa Fe was given a test from 3,848 feet. This well, only recently supdded in, is doing 442 bbls. of unusually clean 27.6 gravity oil daily. The California Petroleum returned No. 3 Foix to production after reperforating the 6¼-inch and the production increased from a few barrels daily to something like 425 bbls. The Standard is making fast footage with its No. 19 South Whittier Community and this well, spudded in a short time ago following the completion of two or three fairly large flowing wells, is scheduled for completion in the Bell zone within three weeks.

Montebello

The St. Helens Petroleum increased its list of producers in the Montebello Field early this week by finishing No. 1 McDonald and, although it was only a small well doing 125 bbls. of 21.9 gravity oil daily from 3,550 feet, it was a satisfactory completion as it is only showing a cut of 2 per cent. The St. Helens has two other drillers in this area, No. 3 Mulholland at 3,928 feet and No. 13 Monterey at 3,320 feet. The Standard's most important well in this district is No. 1 Benedictine, standing cemented at 3,503 feet. Several new wells are expected to be completed in the Fullerton Field within a few weeks, among which are the Birch Oil Co.'s No. 1-A, now in the pay at 4,780 feet and the Shell's Nos. 12 and 13 on the Orange property. The General Petroleum is also expected to chalk up a well or two in this area, as No. 2-A Tonner at 4,130 feet and No. 12 at 4,993 feet are scheduled to be swabbed in before the close of the week.

Seal Beach

The Marland's discovery well at Seal Beach continues to register a stable production and the tendency is to increase rather than diminish, as might be expected. The Standard spudded in No. 1 on the San Gabriel property but it will probably be 10 days before work gets under way on No. 2 as the preliminary work has not yet been completed. The Bell Little Drilling Co., which drilled the Marland's discovery, spudded in No. 1 Selover early this week and, barring the development of mechanical trouble, should have this well in shape for a production test along about December 1. The Marland is making preparations to start drilling operations on another hole or two in this field. The Associated has reached a depth of 1,570 feet in No. 5 Hellman, a structure survey hole, and will probably conclude work within two weeks. It is unknown just how much information the Associated has secured from these five survey holes, but it would seem there are two logical locations, one in the extreme western part of the Hellman lease and another along the east line. The company is contemplating a test along the west line offsetting the Marland's lease and stands a good chance of getting production.

A tentative agreement has been reached by the various factions interested in the Alamitos Heights area adjoining the Marland's holdings in the western part of the Seal Beach Field whereby the Pan American will be permitted to drill a test on a five-acre tract in this section to ascertain whether the acreage will be productive. Attempts to open up Alamitos Heights for drilling have so far been futile but the agreement to grant the Pan American permission to go ahead should meet with general approval. Considerable friction has developed recently between operators and the Long Beach City Council and it is hoped this suggestion of drilling one well will remedy a very disagreeable situation.

McCaslin Oil Co. picked up the top of the pay in its No. 2 Patton-Gregg in the Rideout Heights section of the Whittier Field at 970 feet and, although this well is but one location removed from No. 1, which is pumping 35 bbls. a day, it required an additional 320 feet of hole. The Pan American's No. 1 Chancorina, also in this area, failed to pick up the pay at 2,710 feet, as was expected and, as a result, drilling has been resumed. The company's No. 1 Broderick at 5,026 feet has not yet found anything resembling production and the outlook is rather disappointing. No. 1 Heights of the Petroleum Securities has also taken on a rather doubtful aspect as it is down 4,650 feet with no showings logged. W. W. Lang is erecting a rig for another test in the Rideout Heights section but, judging by the location, the well is pretty close to the south edge of the field, a long shot, with the chance of getting production none too good.

Midway-Sunset

Probably the most important development in the Midway-Sunset area was the decided improvement in the Union's No. 1 Houchin out in the Maricopa Flats. This well picked up the brown shale which has been found to be productive on the Standard's Rass lease adjoining and it is the intention of the Union to stop around 5,650 feet and give the well a chance to make a bid for production at this depth. The Union's No. 2 Boss is also looking rather promising and should, barring mechanical trouble, be in a position to be put on a test within 30 days as it has passed the 5,100-foot level. The Standard finished a comparatively small pumper in Section 3-32-24 when No. 44 Pacific was put on the beam at 3,310 feet, the oil testing 27.6 degrees and showing a cut of 2 per cent.

About the only bit of encouraging news emanating from the Mount Poso Field was the momentarily expected completion of the Union's No. 1 Sarret in Section 4-27-28, an offset to the Shell's No. 1 Vedder in Section 9. With the exception of this, however, there were no developments of interest, although several holes located some distance away have taken on a rather doubtful outlook. This is not surprising as the location of the field has not yet been determined and present development work may perhaps be concentrated in unproductive territory. The Shell's No. 2 Vedder will probably follow the Union's No. 1 Sarret into production within three weeks as it only has about 500 feet to go. Some little delay is being experienced due to a shortage of water but this condition will be remedied.

Southern California Wildcats

The most important feature from a wildcatting standpoint was the decidedly unfavorable outlook which developed in several tests in widely scattered areas. The Marine apparently has a duster in No. 1 Strong at Bellflower, although it still has a chance at 4,708 feet. The Union had the misfortune to run into a rather difficult fishing job in No. 2 Howland at El Segundo and the outlook for a resumption of drilling at 5,197 feet is not any too favorable unless a speedy recovery is effected. The Julian Petroleum, although it logged an occasional streak of oil sand in No. 1 Trust at Manhattan Beach, is abandoning the hole as a duster at 5,741 feet. It is understood the company is contemplating another test on the Paige property southwest of the Shell's holdings. H. A. Bardeen, who has been attempting to effect a water shutoff in the Manhattan Pacific well in this area at 4,409 feet, is still at work but has not experienced any success.

The Smith Petroleum's No. 1 Johnson at Hawthorne has been placed on the doubtful list at 4,300 feet and, while the Barnsdall's No. 1 Merlo in the Puente section also appears rather unfavorable, the latter still has a few hundred feet to go. The Milham Exploration Co. is held up with mechanical trouble in a second test at Playa del Rey and a resumption of drilling at 6,017 feet does not appear any too bright. Featherstone & Preston's No. 1 Blinn in the Clearwater quadrangle has just passed the 3,800-foot level and, while the absence of upper showings is generally considered unfavorable, this test cannot be put on the doubtful list above 4,500 feet. The Calwin Oil Co. has first claim on all the well-known prizes for persistency and, although geologists claim the company has been drilling in granite for a long time, work is still going ahead. This wildcat, located in the Eagle Rock area, was spudded in something like six years ago and is still going strong at 6,055 feet.

Another week's work will probably throw considerable light on the possibilities of several wells which are entering the stage at which production should be found. The Associated's No. 1 Cypress in the Inglewood area has just passed the 3,600-foot level and it is believed another 700 or 800 feet of hole will be added before the close of the week. No. 1 Sesnon of the Petroleum Securities in the San Fernando Valley should also prove interesting as it was checked a few days ago at 3,691 feet.

The Standard's No. 1 University, several miles away, should enter the doubtful list within a few days as it is rapidly nearing 4,000 feet. George W. Johnson, who failed to develop commercial production at Manhattan Beach recently, has entered into a deal with the Marland Oil Co. whereby he will drill a well on the latter's Wickham lease in the Newhall-Saugus district. It will be recalled the Marland found some favorable indications in No. 1 Wickham but was unsuccessful in effecting a satisfactory water shutoff.

The Petroleum Securities has just about finished rigging up No. 1 De Baker at Bandini and it is expected drilling will get under way within two weeks. The Dominguez Extension Oil Co.'s No. 1 Compton is also scheduled for an early spud. The Standard has found drilling in its Topango Canyon well rather difficult and as a result its No. 1 Austin, a cable tool job, is held up with a caving hole at 1,550 feet.

Northern California Wildcats

The Bolsa Chica's wildcat in the Kettleman Hills will be put on a production test within two weeks and, while nothing big is expected, the well might be capable of pumping 25 or 30 bbls. a day. This wildcat is the most promising test being drilled anywhere in the state and it would not be surprising if the company succeeded in opening up a new field. The sand logged at 2,360 feet is the third encountered to date and, due to the fact that something like 50 bbls. was bailed out the other day, the company's geological staff is quite optimistic. Samples of the oil bailed indicate that if commercial production is secured it will run around 18.5 degrees in gravity. The Union has just filed an abandonment notice on No. 2 Theta, a structure survey hole northwest of the Belridge Field in Section 23-28-20 and, while no definite announcement has been made it is believed the company has gathered sufficient data to locate a deep test.

Although the Shell made a little better than 150 feet of hole during the week in its No. 1 Berlywood, a wildcat at Moorpark, the outlook at 6,260 feet was rather discouraging. Neither the Chanslor-Canfield Midway Oil Co. nor the Milham Exploration Co. made any footage in their respective tests in Ventura County. The former's No. 1 Hobson is still held up with mechanical trouble at 5,855 feet, while the latter's No. 1 Sexton is standing recemented at 6,017 feet. The Shell had the misfortune to lose a few stands of drill pipe in its No. 1 Murphy near Petaluma at 2,549 feet but an early recovery is anticipated.

WET GAS FLOW AT TURNER VALLEY TEST GIVES HOPE FOR NEW OIL WELL

By Victor Lauriston
Staff Correspondent, Mexican Fields

CHATHAM, Ont., Sept. 18.—In the Turner Valley Field, southwest of Calgary, Vulcan Oils, Ltd. No. 1, LSD 11, Section 13-20-3w5, at 4,930 feet, has a wet gas flow in the top of the Madison limestone with incidental oil production. The flow started at 2,000,000 feet a day, increasing with a few inches additional drilling to 3,000,000 feet. At 4,930 feet, the hole is 65 feet in the lime. The gas is heavily saturated with gasoline. A few barrels of amber oil brought up by the bailer test about 60 degrees. The location is about 1¼ miles northwest of Royalite No. 4, naphtha gusher. The gas shows between 1,500 and 2,000 pounds rock pressure. The crew is fitting on a control head and moving the boiler 100 yards back from the well, preparatory to drilling deeper into the sand. At this point the top of the Madison limestone was encountered approximately 1,435 feet deeper than in Royalite No. 4, which encouraged the hope that oil instead of a large wet gas flow might be struck. Vulcan Oils No. 2 will be started as soon as No. 1 has been completed. The strike considerably extends the area of the deep production in the Madison limestone and would seem to disprove the theory that Royalite No. 4 might be securing its production from a lower horizon through a fault in the Madison lime. Vulcan No. 1 is the third producer to secure production in the deep lime in this field.

McLeod Oil Co.'s No. 2, LSD 16, Section 1-20-3w5, is fishing at 3,772 feet. The jars and stem have been recovered and the drillers are trying to grapple the lost bit. A non-freezing solution of mud is being put down the hole to keep down the gas pressure of over 1,500 pounds when the bit is released. McLeod's No. 2, at this depth, had a wet gas flow of about 12,500,000 feet a day, with an apparent condensation of 125 bbls. of crude naphtha; the flow temporarily increasing, when the bit was loosened, to 17,000,000 feet a day. A Smith separator has been moved from Okotoks and is being set up to extract the naphtha from the gas.

Has Fishing Job

Royalite Oil Co.'s No. 5, LSD 13, Section 7-20-2w5, is fishing at 3,527 feet. Royalite No. 6, LSD 16, Section 31-19-2w5, is at 3,079 feet and underreaming. It is announced that Royalite Oil Co., which is a producing subsidiary of Imperial Oil, Ltd., is planning to enter upon a more extensive exploration pro-

(Continued on Page 118)

Another Deep Sand at Spindletop

Two Flowing Light Gravity Wells Southwest of Sour Lake. Orange Pool Well Flows 2,200 Bbls. With Drill Stem in Hole.

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Sept. 20.—The discovery of another deep sand below 4,200 feet at Spindletop was the feature of the week's news in the Gulf Coast division. Two flowing wells were developed in the light gravity section on the southeast side at Sour Lake and a well in the Orange Pool started flowing 2,200 bbls. per day with the drill stem in the hole.

The estimated daily average gross production for the week is placed at 193,701 bbls., an increase of 1,916 bbls. over last week's estimate. The south Louisiana pools are credited with 12,580 bbls. of the total output. Compared with last week, Spindletop increased 4,921 bbls. Big Creek, 600 bbls.; Orange, 30 bbls. The Boling district decreased 500 bbls.; Goose Creek, 100 bbls.; Hull, 100 bbls.; Lockport, 1,630 bbls.; Pierce Junction, 760 bbls.; Sour Lake, 100 bbls.; Vinton, 230 bbls., and West Columbia, 50 bbls.

The daily average for each pool is as follows:

Pool—	Daily Average Bbls.
Boling	1,760
Batson	1,500
Blue Ridge	1,375
Big Creek	2,500
Barber Hill	1,200
Dayton	185
Damon Mound	815
Edgerly, (La.)	760
Goose Creek	10,625
Humble	4,520
Hull	22,400
High Island	135
Jennings, (La.)	1,110
Lockport, (La.)	4,970
Markham	70
Nash Dome	1,275
Pierce Junction	2,350
Piedras Pintas	125
Orange	8,000
Orchard	90
Spindletop	97,921
Saratoga	1,440
Sour Lake	9,800
South Liberty	4,050
Vinton, (La.)	5,670
Welsh-Anse La Bute, (La.)	70
West Columbia	8,875
*Miscellaneous	110
Total	193,701

*Includes Nacogdoches, Washington and Kleberg Counties.

Southwest Fields

The estimated daily average gross for the Southwest fields is placed at 45,525 bbls. for the week of September 18, an increase of 1,535 bbls. The Luling Field declined 150 bbls. and the Lockhart (Lytton Springs) decreased 180 bbls. The Mirando districts increased 1,850 bbls.

The estimate for each field is as follows:

Field—	Gross Bbls.
Luling	21,650
*Mirando	17,250
Somerset	2,010
Calliham	90
Rockdale-Minerva	925
Lockhart	3,600
Total	45,525
Grand total this week	239,226
Grand total last week	235,775
Net increase	3,451

*Includes Webb, Jim Hogg and Zapata Counties and part of Duval County (Cole-Bruni and Cin-Tex).

New production during the week in the Gulf Coast pools aggregates 24,235 bbls. against 40,560 bbls. last week. Wells completed number 30, of which 8 were dry and 2 salt water. Nine holes were bailing at the close of the week.

The results for the week in various pools was as follows:

Pool—	Comp.	Prod.	Dry	S.w.	Bail.
Batson	0	0	0	0	2
Big Creek	1	1,600	0	0	0
Edgerly	0	0	0	0	1
Goose Creek	1	0	0	1	1
Humble	1	475	0	0	0
Hull	3	1,900	0	0	1
High Island	1	0	1	0	0
Jennings	3	10	2	0	0
Orange	4	2,650	0	1	1
Pierce Junction	1	260	0	0	0
Spindletop	8	15,800	1	0	1
Saratoga	0	0	0	0	1
Sour Lake	2	1,600	0	0	1
Vinton	3	0	3	0	0
Miscellaneous	1	0	1	0	0
Total	29	24,235	8	2	9
Last week	31	40,560	4	1	13
Difference	2	16,325	4	1	4

In the light gravity section of the Sour Lake Pool, the Yount Lee Oil Co.'s No. 2 Lynn is flowing 650 bbls. by heads from 4,075 feet, and the Orange Petroleum Co.'s No. 1 Merchant is making 950 bbls. from 4,400 feet after being drilled deeper. The Gulf Production Co.'s No. 1-D McLean is bailing salt water at 3,950 feet.

The Gulf company's No. 1 Cora Jackson is drilling around 2,075 feet, and No. 2 at 1,235 feet, with derricks standing for Nos. 3 and 4. The Humphrey Corp.'s No. 2-B Bashara is at 3,655 feet. No. 3 is around 3,600 feet, and No. 4 at 1,390 feet. No. 1-D Bashara is at 1,235 feet. No. 2 Oxford-Kelly is drilling below 880 feet. The Eunice Oil Co.'s No. 2 Eunice is drilling below 3,765 feet with a location made for No. 3. The Orange Petroleum Co.'s No. 2 Merchant is rigging. The Yount Lee Oil Co.'s No. 5 Gilbert is drilling around 4,100 feet. No. 1 Bashara fee is at 3,655 feet and No. 2 around 1,700 feet. No. 3 Lynn is rigging. On the north side, the Humble Oil & Refining Co.'s No. 34 Hardin is fishing. The Lake View Oil Co.'s No. 50 Hardin is around 1,165 feet.

The Pierce Junction Pool, 8 miles south of Houston, follows Spindletop and Sour Lake in the point of activity. The Navarro Oil Co.'s No. 3 Cain there is making 200 bbls. on air at 4,010 feet.

On the north, northwest flanks of the dome, the Rio Bravo Oil Co.'s No. 3 P. F. Settegast is drilling below 3,875 feet, with No. 4 around 1,765 feet and a derrick up for No. 5. Joseph Bashara's No. 2 Bender is at 2,096 feet, and No. 3 Bender is around 3,450 feet with casing set. The Gulf Production Co.'s No. 1-A Jones fee is drilling at 1,980 feet and No. 1 W. H. Jones is around 1,468 feet. The Marland Oil & Refining Co.'s No. 1 Prudential is drilling about 2,060 feet. On the east flank, the Gulf company's No. 19 Taylor is at 3,510 feet. H. R. Cullen's No. 6 Howe is idle. To the north, the Texas Exploration Co.'s No. 10 Dooley is around 2,842 feet. The Navarro Oil Co.'s No. 1 Humble-Dooley is at 2,345 feet.

The Rio Bravo Oil Co.'s No. 11 Jordit is bailing at 1,440 feet.

The Sun Oil Co. abandoned No. 9 Lockhart at High Island, Galveston County, at 275 feet. The Sun Oil Co.'s No. 8-C Cade is at 4,675 feet, and No. 11 Cade is drilling at 2,765 feet.

Fort Bend County Pools

The Gulf Production Co.'s No. 31 Davis in the Big Creek came in late last week making 1,600 bbls. 35 gravity. No. 32 is drilling.

At Blue Ridge, the Gulf Production Co.'s No. 6 West Schenck on the south side is drilling around 3,545 feet and the Humphrey Corp. is rigging No. 1 West-Schenck. On the east flank the Gulf company's No. 9 Luscher is at 1,780 feet and the Sinclair Oil & Gas Co.'s No. 2 Davidson is drilling around 3,345 feet. The Navarro Oil Co. has a location for No. 1 Robinson on the west flank.

The Gulf company has a location for No. 9 Moore at the Orchard Dome, northwest of Rosenburg.

The Rycade Petroleum Corp. is starting Nos. 9 and 10 Wisdom around the Nash Dome on the line of Fort Bend and Brazoria Counties, 8 miles southeast of Damon Mound.

Harris County Pools

In the Goose Creek Pool, the Gulf Coast Oil Corp.'s No. 9 Galliard, a workover, is a water well at 2,800 feet. The Humble Oil & Refining Co.'s No. 12 Peninsula is bailing at 3,502 feet.

A location has been made for No. 9 by the Humble Oil & Refining Co. on the Galliard Peninsula. No. 10 is drilling around 3,045 feet. A derrick is standing for No. 17 and No. 31, a new hole, is drilling around 1,870 feet. No. 1 Myers is rigging. On the Smith tract on the east side of the pool the Humble company's No. 26 is working over at 2,870 feet. No. 68 is drilling around 2,765 feet. The Gulf Production Co.'s No. 6 Hirsch is at 4,765 feet. No. 10 State Land in the bay is at 3,154 feet. The Southern Exploration Co.'s No. 7 Freeman is shut down at 2,808 feet. The M. and B. Oil Co.'s No. 5 Scorrgea, northwest of production, is drilling around 1,165 feet.

In the Humble Pool the Sun Oil Co. has a 475-bbl. well in No. 33 River lease. Benedum & Trees have started drilling No. 1 Hirsch to the northwest of production and John Deering is drilling No. 3 Bissonnett. Several old wells are being worked over in the original section of the pool.

Liberty County Pools

In the Hull Pool, the Empire Gas & Fuel Co.'s No. 20 Barngrover is flowing 1,100 bbls. at 3,100 feet and No. 21 Barngrover is bailing at 3,075 feet. The Hull Oil Co.'s No. 4 Harrison is flowing 2,000 bbls. of fluid, 600 of which is oil, at 3,100 feet. It is on the west side of the dome. The Republic Production-Houston Oil Co.'s No. 138 Dolbear will make a pumper at 2,300 feet.

On the east side of the dome, the Republic Production-Houston Oil Co.'s joint No. 126 Dolbear is sidetracking at 1,175 feet. No. 136 is fishing at 2,475 feet. No. 139 is drilling around 1,200 feet. The Gulf Production Co.'s No. 73 Phoenix is at 1,700 feet and No. 74 around 2,455 feet. No. 6 is deepening at 2,800 feet and No. 62 will be drilled deeper. No. 18 Hannah fee is at 2,900 feet, with a location for No. 19. The Texas Company's No. 1 Armlein is drilling around 2,545 feet. Texas-Vacuum's joint No. 6 Hannah is sidetracking at 3,200 feet. The Humble Oil & Refining Co.'s No. 1 Lynd is deepening at 4,416 feet. Casing has been set in No. 22 Guedry at 3,000 feet. No. 4 Hooks-Spell is rigging to drill deeper. Locations have been made for Nos. 2 Lynd and 5 Merchant. The Hous-

(Continued on Page 81)

DEEPEST PRODUCER AT SPINDLETOP OPENS MORE POSSIBILITIES THERE

By P. L. McGreal

BEAUMONT, Tex., Sept. 20. — The most momentous event in the Spindletop Pool since the development of deep sands off the original cap rock area last November was the discovery of still deeper pay strata on the west side. The Gulf Production Co. got a well flowing 4,000 bbls. through ¾-inch chokers in No. 4-A Weed at 4,244 feet on Wednesday. It is the deepest producer to date in the pool. The oil is 27 gravity. Previous production was found from 2,600 feet to 3,600 feet.

The well is about the center of the group of producers on some 20 acres, the extent of the deep sand area as developed to date and opens more possibilities. The Gulf Production Co. has eight acres of the total and six have thus far been proven good. As a result of the Gulf company's find other wells will be drilled deeper. That company is now rigging to deepen No. 3 Weed, the Sun Oil Co. will deepen wells on its McLean lease and W. C. Turnbow will drill his No. 1 Banks lower.

The production of the pool is constantly fluctuating as the old wells decline only to be supplanted by flush output from new wells. The gross production for the seven-day period ending September 18 was 97,921 bbls. compared with 93,000 bbls. for the previous week. On Monday the gross had dropped to 84,000 bbls., rising during the week to the average given.

The Gulf Production Co. is now leading in the pool, having surpassed the Yount Lee Oil Co., discoverers of the deep sands, during the week. The gross output of each company is as follows:

Company—	Bbls.
Gulf Production Co.	41,027
Yount Lee Oil Co.	35,455
Atlantic Oil Prod. Co.	10,039
Rio Bravo Oil Co.	10,200
Sun Oil Co.	600
Paggi Oil Co.	300
Unity Oil	300
Total	97,921

The potential production is well over 100,000 bbls., as the Gulf company's No. 4-A Weed, the latest deep sander, is estimated good for from 8,000 to 10,000 bbls. if it were opened. Several other wells are also pinched in.

Eight Wells Completed

Eight wells were completed in the pool since the previous review, one going in salt and another bailing. The new output aggregates 15,800 bbls. compared with 30,010 bbls. during the week of September 11. Two pumping wells were completed this week, the first in the history of the deep sand territory.

Aside from the Gulf company's No. 4-A Weed, other completions were as follows: Gulf company's No. 1 Weed deepened to 3,100 feet, flowing 2,500 bbls. initially; No. 4 Mann, 2,500 bbls. at 3,120 feet. The Atlantic Oil Producing Co.'s No. 7 McLean, 4,000 bbls. initially and No. 5 McLean 2,500 bbls. at 3,470 feet. Rio Bravo Oil Co.'s No. 6 Texas and New Orleans Railroad right of way, salt at 2,500 feet. The Sun Oil Co. is swabbing No. 2 McLean, deepened to 3,180 feet.

The Deep Sand Oil Co.'s No. 2 Howell will make a pumper at 3,280 feet as will Ward and Wise's No. 1 McFaddin at 3,425 feet.

Operators in the pool are convinced the Gulf company's deep sander is a new strata and not merely a dip. It is only 70 feet from the Sun Oil Co.'s No. 3 McLean, which is a producer from around 3,500 feet. The Gulf company's No. 1 Jack-Duff is about 700 feet south from No. 4-A Weed, which is producing from around 3,300 feet. The gravity of the oil in No. 1 Jack Duff is 25 degrees, while No. 4-A Weed is 27 Baume.

Additional storage is being provided by the pipelines. The Gulf Pipe Line Co. has finished three 80,000-bbl. steel tanks at its Guffey pumping station and started work on three more of the same size on

(Continued on Page 127)

AS USUAL

Several months ago users of Cooper Compressors asked Cooper engineers for a compressor combination to better meet the high pressure conditions necessary for flowing wells with air pressure and also for putting air pressure on oil sands.

The Cooper answer was an original design of tandem compressors which includes some valuable new features The extreme accessibility so much appreciated by operators and always characteristic of Cooper designs is retained. They also require less floor space than ordinary tandem arrangements, hence can be used in standard buildings. Photographs and complete information will be sent anyone considering such an installation.

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COOPER

Disappointment North of Cole Field

Hopes for Oil Production Dampened but Operators Not Discouraged by Results of Tests There. Quiet Week in Southwest.

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Sept. 20—Something over 100,000,000 feet of gas was added to the gas production in the Laredo territory last week with the completion of six wells and a little over 1,000 bbls. was added to the oil production with the completion of 10 wells in four pools. None of the producers resulted in any extensions or any surprises and the week was one of the quietest southwest Texas has had in some time. There was considerable disappointment in the territory to the north of the Cole Field, where Barkley-Meadows & Morgan some weeks ago got an oil well at the regular sand depth of around 1,745 feet after many futile efforts of others to extend the oil-producing sand that way. They drilled too deep and got salt water and were unable to plug back and so lost the hole. The Gulf company later offset it on the south and got a gas well and last week Barkley-Meadows & Morgan offset it on the east and got a 15,000,000-foot gas well, which dampens the hopes for oil production there, but doesn't entirely discourage. Killam's No. 5 Lopez, off to the west, made a 35,000,000 foot gas well on Block 8 of Survey 319 and those were the only completions in that pool.

The Carolina-Texas Field registered three gas wells. Associated Oil Co.'s No. B-2 came in a big well good for about 50,000,000 feet at 3,005 feet and is a quarter of a mile northwest and in the direction of the gas area from the discovery oil well. Hazlitt-Simmons Corp.'s No. 1 Barnsley, on Block 9 of Survey 268, still farther north, made a 15,000,000-foot gas well at 2,034 feet, and Magnolia Petroleum Co 's No. 1 Webster, a northwest offset to the discovery oil well, made a 7,000,000-foot gas well at 2,614 feet. Saturday Killam and Winch began bailing their No. 1 de la Garza in the center of the east half of Survey 336 and about a mile north of the discovery well, which is producing at 2,600 feet. Killam Winch's well total depth is 3,044 feet. It tested salt water in a sand at 3,010 to 3,018 feet a week before, but was in a new sand and showing a trifle oil.

Randado Completions

Randado Field, in Jim Hogg County, registered five oil wells and one gasser. Magnolia's No. 7 Merchant State Bank, in Survey 267, and on the west side of the field, where there are other gassers, made a 15,000,000-foot gas well at around 1,260 feet. Simms Oil Co.'s No. 13 Palacious, in the northwest quarter of Survey 291, at 1,290 feet came in good for 250 bbls. on the pump. E. L. Smith Oil Co. and C. O Maddox completed three wells. No. 7 at 1,289 feet is good for 125 bbls. on the pump; No. 9 at 1,285 feet is good for 60 bbls. and No. 10 at 1,285 feet good for 75 bbls. The other completion in that field was Johnson's No. 11 Palacious at 1,278 feet on Block 2 of Survey 291, good for 75 bbls.

In the Mid-Ojuelos Pool of the Mirando Field, Crown Central Oil Co. completed No. 12 Garcia at 1,563 feet good for 30 bbls. on the pump.

In the Bruni tract extension or Aviator Pool, Verdine and others' No. 1 completed a small gas well and Murchison & Fain and Ball completed the No. 6 Bruni good for 250 bbls. on the pump at 1,746 feet, located in the southwest quarter of Survey 13.

In the Henne, Winch & Fariss and Kitselman & St. Albans territory Magnolia completed No. B 13 Martinez on Survey 276 at a depth of 2,050 feet, good for a pumper of 100 bbls. Kitselman & St. Albans' No. 45 Holbien at 2,130 feet is a 75-bbl. well and Associated Oil Co.'s No. 1 Lopez, in Block 20 of Share No. 1 of the Las Animas grant, is a small well at 2,147 feet, making (estimated) 50 bbls. of oil and about 2,000,000 feet of gas and some salt water.

During the week there was only one abandonment. This was Creswell & Fallin's No. 1 Billings at 2,508 feet in Survey 10 of Webb County, several miles northeast of the Carolina-Texas Field. The hole was lost.

Cole Gas Field

In Duval County in the Cole gas field, Barkley-Meadows & Morgan's No. 2 King-Harper on their 40-acre tract in Survey 323 is drilling at 1,728 feet, having encountered about 30 feet of sand. O. W. Killam, Survey 319, Block 8, in sand at 1,783 feet, tested salt water and a small showing of oil.

Piedras Pintas-Duval County

Humble Oil & Refining Co.'s No. 6 Walsh is on the pump. This well is in Survey 185, and is the first producer since the discovery well by Humble Oil & Refining Co., the No. 4 Walsh, brought in December 20, 1925. Quite a number of tests have been made, but all have failed to make producers and have been abandoned. On Survey 531, Humble Oil & Refining Co. is drilling at 2,568 feet in No. 1 Becher. Depth of the discovery well was 3,623 feet and in No. 6 Walsh production depth was 3,594 feet.

Randado Field-Jim Hogg

Andrews Petroleum Co.'s No. 1 Palacious, Survey 291, is standing at 1,286 feet. Well tested dry. Grayburg Oil Co.'s No 6 Weil, Block 15, Survey 81, 150 feet from the north and west lines, tested dry at 1,334 feet and is drilling at 1,520 feet. Johnson and others in No. 11 Palacious, Survey 291, Block 3, 150 feet from the south and west lines, is drilling in sand at 1,278 feet, and No. 12 Palacious, same survey, Block 2, 150 feet from the north and west lines, is rigging up. In Survey 291, Block 11, Houston Gulf Gas Co.'s No. 12 Palacious, 528 feet to the north line and 150 feet to the west line, a deep test, is drilling at 2,435 feet. M. J. Bashara's No. 2 Weil, Survey 81, Block 8, 150 feet from the north and east lines, is moving on. Simms Oil Co.'s No. 14 Palacious, on the Simms block in Survey 291, 450 feet to the east line and 150 feet to the north line, is drilling at 264 feet, and No. 15 Palacious, 750 feet to the east line and 150 feet to the north line, is ready to move on. Simms Oil Co. now has on its block in Survey 291 10 oil wells, 2 gassers, one of which is making some oil, and three new locations, two of which are drilling. In Survey 81, Block 16, Simms Oil Co.'s No. 4 Weil is at 1,303 feet, having finished the fishing job, and the derrick is up for No. 5 Weil, 150 feet from the north and east lines. Location has been made in Survey 81, Block 8, 510 feet from the south line and 150 feet from the east line, for Simms Oil Co.'s No. 6 Weil, and on Block 7, 510 feet from the north line and 150 feet from the west line, for No. 7 Weil. Magnolia Petroleum Co. has the derrick up for its No. 7 M. S. Banks, 150 feet from the north line and 1,750 feet from the west line, in Survey 415. Smith-Maddox's No. 5 Palacious, on the Maddox block in the northwest quarter of Survey 291, is drilling in sand at 1,276 feet, and location has been made for No 7, 615 feet from the east line and 450 feet from the south line. Their No. 8 Palacious, in the same tract, is drilling at 1,285 feet, having set casing at 1,280 feet. D. C. Smith's No. 1 Weil, Survey 83, Block 1, 450 feet from the north line and 150 feet from the west line, is ready to spud in, having been held back because of the water shortage.

Henne, Winch & Fariss

In Jim Hogg County in the Henne, Winch & Fariss Pool, the Magnolia Petroleum Co.'s No. 13 Killam-Martinez is in sand at 2,042 feet and is setting casing.

Kitselman & St. Albans

Associated Oil Co.'s No. 1 Lopez, in Jim Hogg County, in the Kitselman & St. Albans Pool, Block 20, is testing sand at 2,147 feet. K. & S Corp., Block 9, Survey 15, in its No. 45 Holbien, is testing sand at 2,130 feet, and No. 46 Holbien, Block 13, Survey 15, is drilling at 2,000 feet. In Survey 11, Block 6, the K. & S. Corp.'s No. 47 Holbien is drilling at 540 feet, and in the same survey on Block 5 the No. 48 Holbien has derrick up. Location is 390 feet from the east line and 150 feet to the north line. Location is being made for the company's No. 49 Holbien, and derrick is up for No. 50 Holbien, Survey 16, Block 19, 210 feet from the south line and 150 feet from the west line.

Bruni Field-Webb

Ruthada Oil Co., on the east half of Block 18, 1,052 feet to the north line and 698 feet to the west line, has made location for its No 7 Bruni. Verdine and others, in Survey 123, are drilling at 1,501 feet in No. 1 Bruni. Harper and others, Survey 835, in No. 1 Bruni are setting liner. O. A. Topham, Block "C," in Survey 2,048, 150 feet from the south and east lines, has derrick up for No. 1 Bruni.

Old Mirando Field

In Webb County, in the Mirando Field, Crown Central Oil Co.'s No. 1 Garcia, in Survey 606, a deep test, is reaming at 2,960 feet, and No. 12 Garcia is setting casing in sand at 1,533 feet. Murchison & Fain have made location in Survey 58, 600 feet from the north line and 850 feet from the west line, for No. 2 Garcia and are moving on.

Carolina-Texas

The Carolina-Texas Field in Webb County has slowed down in activity due to a number of disappointments. The Texas Company's No. 2 Webster, in Survey 684, which came in a small gasser spraying oil at 2,614 feet, is showing a tendency to increase in the amount of oil and before being mudded off and deepened will be opened at intervals and given an opportunity to blow in. Failing to blow in, it will be carried down to 3,000 feet. Associated-Carson's No. D 3, south offset to the discovery well, tested hot salty water, and No. D-4, which is an offset to Murchison & Fain, has been temporarily abandoned at 2,550 feet. Associated Oil Co.'s No. B-1 Webster, in Survey 684, 450 feet from the west line and 1,110 feet from the north line, is setting surface casing at 257 feet, and No. B-2 Webster, which is a south offset to Morgan Brothers' Killam-Suladie well, came in a 40,000,000-foot gas well at 3,005 feet. Moody Oil Corp.'s No. 1 Benavides, in Survey 688, is drilling at 2,370 feet. U. S. Gas & Oil Co.'s No. 1 Benavides, in Survey 679, is coring at 2,626 feet. Killam-Winch, in Block 12, Survey 336, in No 2 de la Garza, is in sand at 3,018 feet and are reaming to set casing. Sand showed oil. Living-

(Continued on Page 113)

SOUTHWESTERN WILDCAT SETBACK; HEBBRONVILLE TESTS SALT WATER

By B. D. Stevenson

SAN ANTONIO, Tex., Sept. 20.—Wildcat operations in southwest Texas had one setback the past week when the L. M. Holden well, 7 miles east of Hebbronville in Jim Hogg County, tested salt water at 3,150 feet, when it was being counted on to open a new gas area, and registered some minor success in Medina County where shallow showings indicate possibilities and encourage further drilling. Operations generally have been slowed up considerably over the disappointment in the Carolina-Texas Field in Webb County not spreading out more but a ray of hope was shining through there. Associated Oil Co. and Usher Carson, it will be remembered, brought in their discovery oil well in Survey 684, last June. Since then the discovery well has been surrounded with tests at the same sand at 2,600 feet resulting in a 40,000,000-foot gas well to the west and another, three locations south and all the other tests have been dry or else small gassers. The Texas Company's No. 1, a north offset, made 7,000,000 feet of gas and a little oil. Its No. 2, which is two locations east of the Associated-Carson oil well and with a dry hole between, came in good for 8,000,000 feet of gas and spraying a little oil. It was shut in and when opened a day later showed an increase in the amount of oil. It is being turned on at intervals to give it an opportunity to increase further in oil and it affords a ray of hope that the line of production may be picked up. The Texas Company's No. 1, which came in some weeks ago was equipped with a siphon and will make from 12 to 15 bbls. of oil when the gas pressure is relieved a little. With the valves closed and the gas pressure all retained it will not make any oil.

The Holden well, east of Hebbronville, is drilling deeper.

In Medina County, Alamo Drilling & Leasing Co. has cored several feet of sand carrying oil at a little below 500 feet in western Medina, 1 mile from the county line and a half-mile south of the Sabinal road on the Kenedy farm. The sand was expected and was being looked for. It may make a small commercial well. The test is to be a deep one and the shallow oil is encouraging the expectation of deeper production. Several new tests are getting under headway south of the Ina Field around the four gas wells of Henderson & Holden on the Adams farm, which at about 1,000 feet, have a combined open flow of 50,000,000 feet of gas. Wells to the south and east have shown oil at the same depth as the gas sand.

Starr County Campaign

Within a few weeks at the most the long-expected and long-delayed drilling campaign in Starr County will begin. Danciger, Simms, The Texas Company, Ramsey-Maxey, McCarley & Heard and Pearson and others are drilling now or moving in. An extensive campaign to drill Starr County has been held back by the difficulty to get titles cleared. One big company dug up the original grant from the crown of Spain, which was found on file at Carmargo, across the river in Mexico and dated 1667, in order to clear its titles.

The Balcones fault, east of San Antonio, is to have a number of new tests which will be announced in another week

(Continued on Page 117)

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Quotation from an editorial in National Petroleum News, page 63, issue of August 13, 1923:

Natural Price Stabilization Is Arriving

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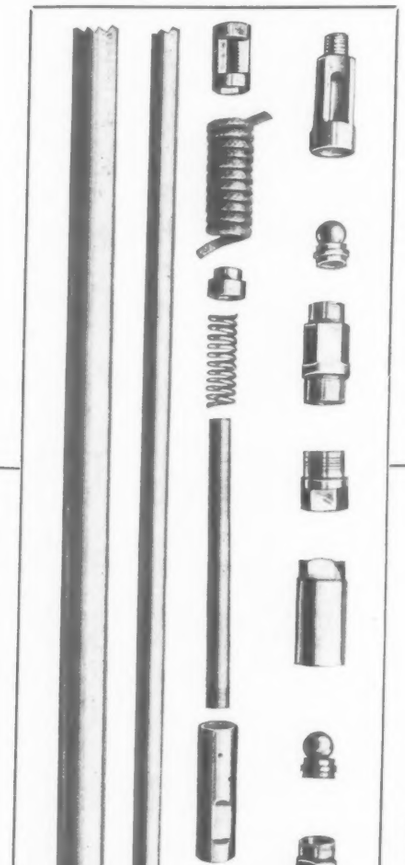

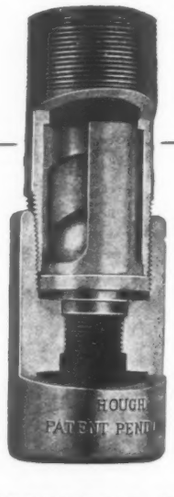

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Products That Cut Down Your Underground Overhead

Allendale Field Has Good Completions

Illinois District Reports Better Than Average Wells. Coshocton County, Ohio, Has 175-Bbl. Initial Producer

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Sept. 19.—Little was accomplished in the Central West Field during the week on account of the continuous rains over almost the entire area, doing hundreds of dollars damage to oil fields. At Terre Haute, Ind., the Wabash River was 19 feet above normal. The Illinois Pipe Line Co. was flooded with water at Martinsville, Ill., and the side roads are in such shape that it is impossible to move material over them.

While only a few straggling wells were reported, some of considerable interest were brought in, the largest being on the Mossholder farm, Perry Township, Coshocton County, in the Central Ohio Field, with a flush of 175 bbls.; a test on the L. A. Severacool farm, in the Chatham Field, of Medina County, also in central Ohio, showed a flush of 50 bbls. at the shallow depth of 300 feet, making a slight extension to the old development made there several years ago. In the old Lima Field, the Cygnet Field of Bloom Township, Wood County, is once more to the front with a 75-bbl. initial producer on the R. A. Hughes property, the oil being found at a depth of 1,386 feet, or 223 feet in the Trenton rock. In the Illinois Field, Wabash County leads with one well at 150 bbls., another at 100 bbls. and one at 75 bbls., which has brought the Wabash County production up close around 5,000 bbls. daily. A Niagara lime well in Martinsville Township, Clark County, same State, showed 70 bbls. initial production and is on the McClelland farm.

Lima Field

Another very interesting oil well has been found in the old Lima Field of northwestern Ohio, that shows conclusively that deeper drilling means much for the old field. Helena L. Hughes of Cygnet drilled in her No. 4 on the Rolla A. Hughes farm, mapped as the J. Katzmeyer farm, in the southwest quarter of Section 7, Bloom Township, Wood County, and 600 feet from the south line and 540 feet from the east line of the property, which struck the top of the Trenton at 1,163 feet and the oil pay at 223 feet in the sands at a total depth of 1,386 feet, the well showing an initial production of 75 bbls. This well is in where wells have been producing from the early days of the opening of the Trenton Rock Field. The good production is due to drilling deeper for what is known as the fourth pay sand and other pays are found at greater depths in the same area which covers what is known as the Sucker-Rod Belt or Hogs Back Anticline, which in years back produced some wonderful producing wells and is still capable of furnishing many more commercial producers as the early wells were drilled not to exceed 100 feet in the sand. It is wells of this kind that have brought about the pre-leasing of vast acreage throughout the fields that have been producing and abandoned as producers from the more shallow pays in the Trenton. The Hughes well is one of the recent completions along this one-time famous oil belt, but many others will be drilled from time to time.

In Scott Township, Sandusky County, just out of the town of Rollersville, Stitt, Pool and James drilled in their No. 54 well on fee property, its location being 600 feet from the south line and 1,200 feet from the west line of the farm, in the northwest quarter of Section 4, and showed an initial of 7 bbls., top of the Tranron at 1,273 feet and drilled 78 feet in the sand to a total depth of 1,351 feet. This lease has been a steady producer of oil since 1890. It was formerly known as the Stitt, Pool and Sager property, the three former owners having passed over the divide, the last being Robert G. Stitt, who passed away a couple of years ago.

In the Roundhead Field of McDonel Township, Hardin County, some miles south from the old producing area, the Hardin Oil & Gas Co.'s No. 7, on the A. R. Zimmerman farm, is reported showing for 20 bbls.

In Bath Township, Allen County, northeast of Lima and between there and Findlay, C. C. Apple, the well known Lima operator, has drilled in his No. 12 well, 200 feet from the north line and 800 feet from the west line of the John W. Fetter farm, in the northeast quarter of Section 21, and has a 15-bbl. initial pumper. Sand was topped at 1,293 feet and oil at 65 feet in the sand, the total depth being 1,358 feet.

The Oko Oil & Gas Co., of Lima, Ohio, has a couple of wells due for completion within a few days, both in Perrysburg Township, Wood County, several miles south of the town of Perrysburg, in No. 8 on the George Devena farm, Section 29, and No. 4 on the Charles Theiss, Jr., farm, Section 28. This company's No. 7, on the George Devena farm, was an incentive for more active development as the territory has proved as good as anything found in the Lima Field for a long period. No. 7, if allowed to produce its full quota, would have shown at least 100 bbls.

There are a few of the old-time wells that were drilled only a few feet in the Trenton, which struck heavy pays that have been producing for many years, now being drilled deeper in the Trenton rock in hopes of finding a lower pay and many of the oil men favor this development rather than to go out and make an effort to extend the old producing lines as they figure a deeper pay can be found at most any point within the radius of the field as it stood several years ago.

Continuous rains upset plans of the operators who were looking for an unusual amount of development during September, but should the weather improve, October should be the banner month of the year, as it has always proved an active month, lease owners being anxious to get as many producing wells as possible attached to their power plants before the heavy snows and cold winter season.

Central Ohio

Central Ohio Field, as well as others in the central west group, has been rather quiet on account of heavy storms, but a revival is expected as soon as weather conditions permit. The most important find of the week as to oil production in the central Ohio area, was made by the Ohio Fuel Supply Co. in a test 1,700 feet from the north line and 200 feet from the west line of the L. A. Severacool farm, mapped as the Lucius Severe farm, Lot 4, Section 16, Chatham Township, Medina County, and some distance in advance of the old Chatham Field, which several years ago surprised the trade by its good shallow wells. The new well struck its pay at a shallow depth of 300 feet and showed a first 24 hours' initial production of 50 bbls., after given a light shot. In Section 14, same township, the E. R. Edson Son Co.'s No. 25, in the northeast corner of the Carl G. Packard farm, Lot 4, pumped but 1 bbl. after given a shot at the shallow depth of 405 feet.

A well credited with an initial production of 175 bbls., was drilled by Murphy and others in the southeast corner of the Dr. D. Mossholder 163 acres, in Section 15, Perry Township, Coshocton County. How this well will show for staying qualities can not be told until allowed to produce for a month or so. The first completion on this farm, while larger than No. 3, went down rapidly to a small stripper.

The Logan Gas Co. will do some new work in Wheeling Township, Guernsey County, having made locations for wells on the William T. Booth 170 acres and the A. R. Booth 106 acres, both in Section 8.

The annual meeting of the Ohio Gas and Oil Men's Association will be held at the Elks Home, East Broad Street, Columbus, Ohio, October 5 and 6, and prospects are for the best convention ever held.

Indiana

Three completions are reported from the Indiana Field, there being one producer, a gas well and a dry hole, all in the southwestern portion of the State. The oil well was the Gem Oil Corp.'s third well, 650 feet from the south and west lines of the George A. Taylor farm, in the southwest quarter of Section 9, Monroe Township, Pike County, with an initial production of 20 bbls. Sand was topped at 1,289 feet and drilled 21 feet in the sand to a total depth of 1,310 feet. Several wells are due for completion in Logan, Clay and Washington Township, same county.

Bell Brothers and others' test, in the northwest corner of the Joseph Armstrong farm, Lot 108, Washington Township, Gibson County, proved a dry hole at 1,600 feet. In Barton Township, same county, the same firm's test, 200 feet from the north line and 1,160 feet from the east line of the M. M. Conrad farm, in the northwest quarter of Section 16, proved a light gas well at a depth of 1,047 feet. The Euclid Oil Co. is starting its No. 3 on the Veirling heirs' farm, Section 28, Washington Township.

No new completions were reported from the Berne Field, in Adams County, although half a dozen wells are nearing the pay sand, which is the Trenton rock. It is in the east central portion of the State, between Fort Wayne and Portland.

Illinois

Activities are unabated in the Allendale Field of Wabash County, Illinois, and are being intensified by the success most operators are meeting with. This field alone is reported to be producing close around 5,000 bbls. of oil a day, and each week adds to the volume as new oil comes in. The eight wells of Mayhugh and others, on the Kogan heirs' farm, are said to be producing around 650 to 700 bbls. a day, and those on the F. M. Leek farm, the Madden farm, the Holson-Dorney farm, the Breen farm, the Gher heirs' farm and the Edward Armstrong farm, and half a dozen other farms in the field, are pouring hundreds of barrels of "liquid gold" into the local tanks and is now one of the most productive fields in the State.

Of the late completions in the Wabash Township, Wabash County area, Mayhugh and others' No. 8 well, 1,200 feet from the north line of the Kogan heirs' farm, Section 2, struck top of sand at 1,420 feet and at 20 feet in the sand, produced 150 bbls. initial. Hope Oil Co.'s No. 4 well, 200 feet from the south line and 600 feet from the west line of the W. M. Banks farm, Section 6, showed an initial production of 100 bbls., with sand topped at 1,347 feet and 11 feet in the sand, while No. 5 well, 600 feet from

(Continued on Page 94)

OIL PRODUCING AREA EXTENDED NEAR IVYTON FIELD, KENTUCKY

By Whit
Staff Correspondent, Kentucky-Tennessee Fields

GLASGOW, Ky., Sept. 18.—The most important find in the Kentucky Field for a short period was made in a test on the Jake Allen farm, District 21, on Salt Lick, of the Licking River, in Floyd-Knott Counties, the well showing an initial of 25 bbls. and a slight extension to the Ivyton Field. At this time this looks like one of the interesting areas for new work in the eastern division and not far removed from where Hupp, Duff and Chiles recently brought in two or three nice producers in the southeastern portion of Magoffin County, and between the big producing area of Magoffin County and the Beaver Creek Field of Lloyd County. The Hupp, Duff and Chiles' wells on the Whitt farm made a 2-mile extension and the new well on the Allen farm, is on ahead, making prospects good for quite an additional acreage for future development.

The only other completion in Kentucky for the week of any magnitude was a 25-bbl. producer in No. 41 on the H. W. Duff farm, in Hall Baker Pool, of Barren County, drilled by the Consolidated Gas Co. Very few completions were reported in any part of the Blue Grass State, owing to heavy rains that almost put the highways out of commission.

Week's Work Summarized

A summary of the week's work in the Kentucky Field show 20 completions, 13 producers with an intial production of 116 bbls., and 7 dry holes. Compared with the previous week, there were 10 less completions, 10 less producers, 119 bbls. less production, 2 more dry holes and 2 less gas wells. The wells were distributed by counties and districts as follows:

County—	Comp.	Oil Wells	Prod.	Dry	Gas
Barren	7	6	58	1	0
Owensboro dist.	6	3	25	3	0
Warren	2	1	2	1	0
Floyd-Knott	1	1	25	0	0
Lawrence-Johnson	1	1	5	0	0
Allen	1	1	1	0	0
Simpson	1	0	0	1	0
Cumberl'd-Monroe	1	0	0	1	0
Total	20	13	116	7	0
Last week	30	23	235	5	2
Difference	10	10	119	2	2

Kentucky Oil Runs

During the month of August, 376,182.82 bbls. of crude oil were run through the major pipelines, making their reports in Kentucky. The eastern division led with 248,725.39 bbls. This crude was purchased by the Cumberland Pipe Line Corp. and runs as follows: Week ending August 7, 63,059.75 bbls.; week ending, August 14, 62,270.33 bbls.; week ending August 21, 63,162.19 bbls.; week ending August 28, 60,233.12 bbls.

Pipeline runs during August in the western division amounted to 127,457.43 bbls.; a decrease of 2,079.05 bbls., compared with the July figures. The runs

(Continued on Page 97)

SUCKER ROD QUALITY MEANS ECONOMY

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D&B Sucker Rods "stand the gaff" of jerking, whipping, push and pull vibration of deep well pumping. The idea is to bring up the oil with a *minimum* of time and effort. Sucker Rod quality is economy in the long run.

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CONTINENTAL

Unsatisfactory Week in Eastern Fields

Fewer Completions and New Production Small. Henry District, Clay County, West Virginia, Most Active

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Sept. 20. — In every way the week just closed was the most unsatisfactory of any in a number of months. Fewer wells were completed and the new production very small. The wells completed were distributed through the old producing districts where nothing better than light pumpers could be expected. Unless there is a decided improvement during the remainder of the month the volume of new production from all sections of the eastern fields will be much less than in August of any preceding month.

In same localities a good deal of work was shut down on account of the scarcity of water, but this hindrance no longer exists and the wells completed during the week are those that had been held up. West Virginia completed more wells than southeastern Ohio, but the new production was less than that of southeastern Ohio.

Wildcatters are doing very little in the search for strictly new producing territory. In the southwest counties of West Virginia there is a very little experimental work under way and starting. During the summer counties that had not been closely tested have received some attention and dusters have been the result. At best the prospects for strictly new fields in West Virginia are not promising. There will probably be from time to time new but congested pools discovered.

West Virginia and southwest Pennsylvania completed light wells, the best a 30-bbl. producer on the Nora Mitchell farm in Grant district, Ritchie County, West Virginia is still completing more gassers than oil producers. A good many of the wells are shut in, awaiting pipeline connections. The average price paid for gas in West Virginia is 14 cents per 1,000 feet. Some of the larger gas companies claim they will meet the winter's demand with a larger available supply than last year. Drilling for gas in Lincoln and Kanawha Counties shows less work under way than at any time during the year. Conditions in Boone County are just the reverse. Both the oil and gas companies are active in Boone County.

Nine-tenths of the work under way in southwest Pennsylvania is in Greene County. All of the one time good producers in Morris Township have dropped below 50 bbls. a day. In the vicinity of the Rutan farms several wells are due to get the sand next week. It is not likely the production of the pool will reach its previous high point.

West Virginia

Despite the fact that some of the larger companies are curtailing operations in Henry district, Clay County, West Virginia, it is still one of the most active developments in the eastern fields. Moreover, the producing limits of the pool have not been defined. It is probably the policy of the large companies is to do as little work as possible until the market improves. It is not unusual for operators to be busy at this time of the year completing as much work as possible while weather conditions are good. At present there are 10 rigs up and 16 wells drilling in Henry district. When these have been completed there will be very little doing. Furthermore, it is not likely that the pool will show much if any increase in production. The new production will about supplant the decline in the old wells. If the producing limits are not extended it will still be the largest discovered in West Virginia in the past decade. Blue Creek Field preceded it.

The Ohio Fuel Oil Co. is drilling a second test on the James Reed farm. The South Penn Oil Co. has the rig completed for a test on the A. B. Hicks farm. In Union district, the Chalmers Oil & Gas Co. is drilling a second test on the Samuel Samples farm.

Lincoln County

Lincoln County, where the gas companies have been very active during the summer, shows a decline in operations. At this time there are but 2 rigs up and 10 wells drilling. In Carroll district, the Grant Gas Co. is drilling a test on the Everett Vickers farm. In Big Sandy district, Kanawha County, the United Fuel Gas Co. is drilling tests on the Etta Wherle, E. C. Taylor and Ralph Smith heirs' farms and a rig is up on the K. J. Shamblin farm. Snyder & Co. have a rig up for a test on the O. B. White farm. Operations are almost at a standstill in Putnam County. In Grant district, Ellis & Adkins are drilling a test on the William Chapman farm. In McComas district, Cabell County, Farr & Figley are due in the sand at a test on the C. A. Wetherholt farm.

Clay County

In the Big Injun Pool, in Henry district, Clay County, the Virginia Gasoline & Oil Co. has completed a test on the R. R. Lockhart farm good for 10 bbls. a day. The location is 500 feet north of the South Penn Oil Co.'s No. 1 on the R. P. Kyle farm. In the same district, the Ohio Fuel Oil Co. completed No. 13 on the J. B. Caston 220 acres showing for a 30-bbl. producer. In the same district, the South Penn Oil Co. completed and shot No. 35 on the O. D. Stockly farm good for 20 or 25 bbls. a day.

In Grant district, Pleasants County, Barkwell Brothers & Co.'s test on the O. C. Reynolds farm is a duster and abandoned. In Clay district, Wirt County, V. B. Darbey has completed a test on the Little Kanawha Log & Tie Co.'s property, a very light pumper in the Big Injun sand.

In Murphy district, Ritchie County, the Hope Natural Gas Co.'s test on the C. B. Nutter farm is a gasser in the Big Injun sand. In Carroll district, Lincoln County, C. C. Wolf's test on the Nida-Pridemore farm is a gasser in the Berea grit. In the same district, L. R. Sweetland's No. 8 on his own farm is a gasser in the same formation.

In Walker district, Wood County, the Power Oil Co. drilled its No. 111 on the Volcanic tract through the Gordon sand. It is a small gas well. On the same tract, the same company is drilling old No. 98 to the lower sands.

In Clay district, Wirt County, the Victor Petroleum Co. has completed in the second Cow Run sand No. 13 on the George Lemon farm. It is a very light pumper. The same company has moved a drilling machine to the location for No. 14 on the same farm. In Reedy district, Wirt County, the Ohio Fuel Oil Co. has a 4-bbl. pumper in the Berea grit at a second test on the B. F. Brown farm. In Graham district, Mason County, the same company is drilling at 1,600 feet on the T. H. Elliott farm.

Roane and Calhoun

In Smithfield district, Roane County, Douglass Brothers have a good gasser at a second test on the C. P. Adams farm. In the same district, Godfrey L. Cabot has a Big Injun sand gasser at a second test on the Harless farm. In Sheridan district, Calhoun County, Mr. Cabot is drilling a No. 6 on the B. B. Ferrell farm. In the same district, the Chemical Oil & Gas Co. has a rig up for a test on the R. L. Richards farm. In the same district, W. H. Bickel is due in the sand at a second test on the Thomas Wolverton farm. In Center district, Calhoun County, W. B. and Lewis Bickel's No. 7 on the Stump heirs' farm is a duster in the Big Injun sand. In Sherman district, the Hope Construction & Refining Co. is trying to exhaust the salt water developed in its second test on the Okey Parsons farm. In DeKalb district, Gilmer County, the McCall Oil & Gas Co. had the same luck at a test on the Jerusha Stalnaker farm.

In Union district, Clay County, the Empire Petroleum Co.'s No. 3 on the Charles Osborne farm is a fair gasser in the Big Injun sand. In the same district, the Eastern Carbon Black Co. got a fair gasser in the same formation at a second test on the B. Samples farm. The Chalmers Oil & Gas Co. is drilling a second test on the Samuel Samples farm.

West Virginia completed light wells at the close of the week. In Henry district, Clay County, the South Penn Oil Co. completed in the Big Injun sand No. 32 on the O. D. Stockly farm, not good for more than 5 or 10 bbls. a day. In Union district, Tyler County, Morgan Brothers have a very light pumper at a test on the Neely Weckham farm.

On Big Rock Camp Run, Spring Creek district, Wirt County, the Federal Oil & Gas Co. has completed No. 34 on the Roberts, Pell & Newman tract, a very light pumper in the third salt sand. On Green Creek, Harper district, Roane County, the Green Creek Oil & Gas Co. has the rig completed for a test on the Lara-Koontz farm.

Gas Pressure Increases Production

In Ten Mile district, Harrison County, the South Penn Oil Co. has put a gas pressure of 150 pounds on wells No. 4 to 10 on the J. C. Williams farm, increasing their production from 60 to 120 bbls. a week. In the same district, the same company gave Nos. 1 to 3 on the T. H. Williams farm the same treatment and increased their production from 15 to 30 bbls. a week. By this method an additional production of 75 bbls. a week was secured and other wells in the same locality will be given the same treatment.

In Williams district, Wood County, located in the Plum Run Pool, Decker & Smith have completed in the salt sand No. 3 on the Dora McAtee farm. It is a duster. In Grant district, Ritchie County, the Carnegie Natural Gas Co. has the rig completed for another test on the A. L. Britton farm.

Starting Test Wells

In Lee district, Calhoun County, McIntosh & Scott have started to drill on the C. C. Starcher farm. In Sherman district, Charles Kingsbury & Scott have started to drill on the L. C. Force farm. In Center district, Gilmer County, Britton Brothers are drilling on the Morris farm. In Walton district, Roane County, the United Fuel Gas Co. has started to drill on the Littlepage-Jackson farm. In Geary district, the same company has started to drill on the Mary A. Smith farm and is building a rig on the F. G. Jackson farm. In Reedy district, the Heck Oil Co. is rigging up on the J. W. Conley farm. In Battelle district, Monongalia County, the Manufacturers Light & Heat Co. has started to drill on the E. J. Hennen farm and made a location on the R. S. Clovis farm.

Drilling Tests

In Scott district, Boone County, the Downing Gas Co. has started to drill on the S. E. Hill farm. In Glenville district, Gilmer County, the Pittsburgh & West Virginia Gas Co. is building rigs on the J. R. Lynch and E. D. Fulton farms. In Skin Creek district, Lewis County, the Hope Natural Gas Co. is

(Continued on Page 101)

VENEZUELAN FIELD OPERATIONS; CARIBBEAN CO. TO DRILL DEEPER

By Special Correspondent

MARACAIBO, Venezuela, Aug. 26.— The wildcat well at Sibucara, being drilled by Venezuela Oil Concessions, located between Maracaibo and La Concepcion, encountered 3,000,000 feet of gas at a depth of 1,224 feet. Five days after the gas on this well was encountered it caught afire, the entire rig being burned. Several natives were badly burned as well as one of the Caribbean's geologists. The fire was caused by one of the drillers pouring hot babbitt too close to the hole. After having encountered the gas at 1,224 feet they had continued drilling to a depth of 1,245 feet The fire was put out by steam. They are rushing the building of a new derrick.

Wampum Oil Corp.'s No. 1 had a small showing of oil at 1,700 feet. At a depth of 1,927 feet it struck the tar sand and is drilling at a depth of 1,975 feet in the same formation. In the La Rosa the tar sand is generally encountered around 550 or 650 feet above the oil sands. Providing the formations run the same as in La Rosa, Wampum No. 1 should be brought in around 2,600 feet.

Superior's No. 25 reached the top of the first tar sand at a depth of 1,965 feet. This is 36 feet deeper than the depth at which Wampum No. 1 struck it. Superior's No. 25 is an offset to Rodriquez No. 9 which to date has produced over 500,000 bbls.

Venezuelan Oil Concessions' No. 17 in the La Rosa Field was completed at a depth of 2,254 feet for an initial production of 1,000 bbls.

Absorption Plant

At Mene Grande, the Caribbean Petroleum Co. is enlarging its absorption gasoline plant to treat approximately 20,000,000 feet daily. With the gas yielding around two gallons to the 1,000 feet it will be possible for the Caribbean to produce approximately 40,000 gallons daily, or say 1,000 bbls. At this rate it will be producing 30,000 bbls. monthly or three shiploads.

The Caribbean people will use the dry gas as fuel in drilling other wells in their field. In connection with the above work, the Caribbean is now constructing new houses for forty men who are en route from the States.

To Drill Deeper Sands

The Caribbean company will drill all old wells 400 to 600 feet deeper into the Pauji shale. It is getting more production as well as gas from the Pauji shale, and the wells seem to hold up better.

Mene Grande well No. 86 was completed at a depth of 2,223 feet for an

(Continued on Page 105)

EQUIPMENT AND SUPPLIES

DUNN COMPANY OPENS EXPORT SALES OFFICE

The recent announcement made by the Dunn Manufacturing Co. of Oxnard, Calif., of the opening of an export office in New York City, is a matter of considerable interest to the petroleum interests abroad. This move on the part of the Dunn Manufacturing Co. has resulted, it is announced, from the rapidly growing demand for Dunn patented oil well tools in foreign fields and is intended to make possible much closer relations between this manufacturer of specialized oil tools and its foreign customers.

The New York office, which will be in charge of F. L. Convers, will be located at 150 Broadway, and will be utilized primarily as a service department to enable the company to keep in closer touch with activities in all the old established fields, as well as the new districts which are continually being developed; and to have a more intimate knowledge of the requirements of foreign operators.

VISITING TEXAS FIELDS

J. S. Mellon, sales manager of the Dunn Manufacturing Co., has recently changed his field of operation to the Texas territory, where he expects to be kept busy during the next few weeks looking after his company's interests. For the present, Mr. Mellon is making Wichita Falls, Tex., his headquarters. In order to take care of the business throughout Oklahoma, Texas, Arkansas, and Louisiana, the company has established a central warehouse and offices in Tulsa, where complete stocks of all Dunn patented oil well tools and parts are carried. A catalog listing the complete line of Dunn products is now in preparation.

OPENS DENVER BRANCH

The Bristol Co., Waterbury, Conn., manufacturers of recording pressure gauges, thermometers, pyrometers, etc., announces the opening of a branch sales and service office in the U. S. National Bank Building, Denver, Colo., H. T. Weeks, representative in charge.

IN CHARGE OF INSTALLATIONS

Effective immediately, C. H. Johnson has been appointed engineer, service department, of the Timken Roller Bearing Co. He will have direct charge of the installation of Timken bearings in automotive and industrial applications. Mr. Johnson's experience in this field with the Timken company qualifies him particularly to direct this class of work.

VENEZUELA REPRESENTATIVE

Emsco Derrick & Equipment Co. announces the concluding of negotiations whereby Ben H. Johnson assumes the exclusive representation of this company's line of oil well equipment throughout the Republic of Venezuela. Mr. Johnson, who will make his headquarters in Maracaibo, needs no introduction to the South American trade, his activities for years in this field being an assurance that the company has taken a step in the right direction to give its customers real service.

CHAIN BELT REPRESENTATIVES

The Chain Belt Co., manufacturers of Rex chain and conveyors, announces the appointment of George E. Coursey and E. E. Elsey as its special representatives in southern Ohio, southeastern Indiana and eastern Kentucky. The firm of George E. Coursey is located at 701 Union Central Building, Cincinnati, Ohio.

DeBRUNNER TO MANAGE N. A. C. C. DIVISION

Henry H. Brigham, president of the North American Car Corp. of Chicago, announces that Charles F. DeBrunner, for 23 years associated with the United Iron Works, where he served in capacities ranging from accountant, plant manager and general manager, has resigned to become manager of the plate and structural division of the North American Car Corp., with headquarters in the Petroleum Building, Tulsa.

This new department, recently created, will be under Mr. DeBrunner's personal management and supervision. Mr. DeBrunner brings to his new task a knowledge and experience of value to the oil fraternity. The North American Car Corp. has created an organization to handle the fabricating and assembling of horizontal and vertical tank storage in capacities up to 80,000 bbls., and cutting down and re-erecting tanks of all sizes. Fabricating steel for buildings and complete fabrication of steel trusses will be a part of the work.

Charles F. DeBrunner

The corporation maintains complete car building and repair shops at Chicago, Tulsa and Coffeyville, through which it services its more than 3,500 tank and refrigerator cars. At New Orleans it maintains fully equipped storage facilities for all liquid commodities, either for import or export, with facilities for docking ships of any length or draft.

GENERAL SALES MANAGER

Preparing to extend its sales activities, the Brooks Engineering Corp., through its president, Stephen H. Brooks, announces the appointment of Frank B. Long as general sales manager. Mr. Long became associated with the corporation on September 1. He enjoys a host of friends in the West, having been in contact with executives of the petroleum industry for several years.

PORTER & CO. MOVE

Announcement is made of the removal of the offices of Porter & Co. from 629 South Spring St. to the Board of Trade Building at the corner of Seventh and Main Sts., Los Angeles, Calif.

MINING CO. INSTALLS LARGE DIESEL ENGINES

Those who have followed the growth of the Diesel engines in the last few years are fully aware of the tendency toward the use of larger units. This is further evidenced by an order just received by a Milwaukee, Wis., company from the Commerce Mining & Royalty Co. of Miami, Okla., for three 2,250 horse power units, or a total installation of 6,750 horse power.

At present a portion of the power is generated by steam and gas engine units, located at widely separated points. The major portion of the power, however, is purchased, but when installed the three Diesel units will comprise the only source of power.

It is planned to locate the Diesel plant at Cardin, Okla. This new plant will be laid out with the thought of future expansion to permit the installation of additional units, should power demands require it. Each engine, which is of the four-cylinder, two-stroke-cycle type, will be connected to a 2,000 KVA generator, 2,300-volt, 25-cycle, 3-phase. A large oil storage capacity will be provided to permit the purchase of oil under most favorable conditions.

STEEL CORPORATION TO MAKE LINED PIPE

The U. S. Steel Corp. has acquired from British interests, whose identity has not been disclosed, the American patent rights on a new process which is said to make possible the lining of steel pipe in such a way as to make it impervious to moisture. A small plant will be built to manufacture the pipe, the corporation's finance committee having authorized an appropriation.

The arrangement which the Steel corporation has made with the British permits it to purchase, if it decides to do so, a half interest in the basic world patent on the new pipe lining.

The new steel pipe, it is said, will permit the corporation to compete in all fields where iron pipe now is used exclusively. Hitherto the field for water and gas mains has been closed to steel pipe.

The new process is understood to consist of a vitrified lining and casing which can be put on steel pipe made under the old methods or produced by the centrifugal method. Beyond confirming the fact that it had become interested in the process, the Steel corporation declined to disclose any details.

ATLANTA FACTORY BRANCH

The Kuhlman Electric Co., Bay City, Mich., manufacturers of Kuhlman power, distribution and street lighting transformers, announces the opening of a direct factory branch in Atlanta, Ga. The office is at 411 Glenn Building, in charge of Ernest K. Higginbottom.

PUMP DISPLAY AT FAIR

H. E. Cassidy, advertising manager of the D. & B. Pump & Supply Co., arranged an elaborate and unique display for his company at the fair held in Bakersfield, Calif. The display consisted of a complete oil well and rig in miniature with a D. & B. pump in operation and other D. & B. products in use at various points in the derrick.

GENE COLLINS WEDS

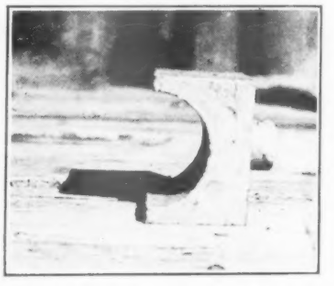
Gene Collins, representing the D. & B. Pump & Supply Co. of California in the Louisiana-Arkansas territory, was married on September 8 to Miss Ruth Boyd of Connecticut.

NEW TYPE OF PITMAN PLACED IN FIELDS

The Oil Well Supply Co. has placed a new type of pitman in the fields through the Casper machine shop, this pitman being designed and built at the local shops at Casper.

The new pitman is made of steel with two pieces of wood, one at the top and one at the bottom. The upper wood block is of Oregon fir, and through its resiliency takes up the jar that a solid metal pitman would have transmitted to the driving machinery. The lower block is of oak, which affords less jar than does the solid metal, yet gives the required strength. The wrist pin bearing is a solid block of babbitt metal, easily removed or replaced, and the wrist pin is clamped in the bearing by means of a lever on the outside of the pitman, thereby doing away with the old-time key and maul.

New pitman brought out by the Oil Well Supply Co.



Bearing block of babbitt metal for new style pitman.

JOINS W-K-M SALES FORCE

Dan Hines, who has been connected with the oil industry in the Gulf Coast and Mid-Continent since 1910, has become associated with the sales department of the W-K-M Co., Inc., Houston, Tex. Mr. Hines started his adventures in oil at Humble with Jim Patrick. For four years he served the Standard Oil Co. of Louisiana, and subsequently served as a driller with the Navarro Oil Co. He later joined the research department of the Oil Well Supply Co.

N. P. ERWIN DIES

BEAUMONT, Tex., Sept. 18.—Norman P. Erwin, general manager of the Beaumont Iron Works, died at his home here. He was formerly sales manager of the company and had lived in this city for 22 years.

Gallagher Protection *is* Fire Prevention

Fight costly fires by preventing them. Prevent excessive waste and loss by eliminating evaporation. Insure proper and adequate protection for your crude and refined products by equipping your tanks with the Gallagher *Pontoon* Deck, because Gallagher Protection *is* Fire Prevention.

For each tank of oil you have in storage, there are reasons for the Gallagher. Write us for complete information.

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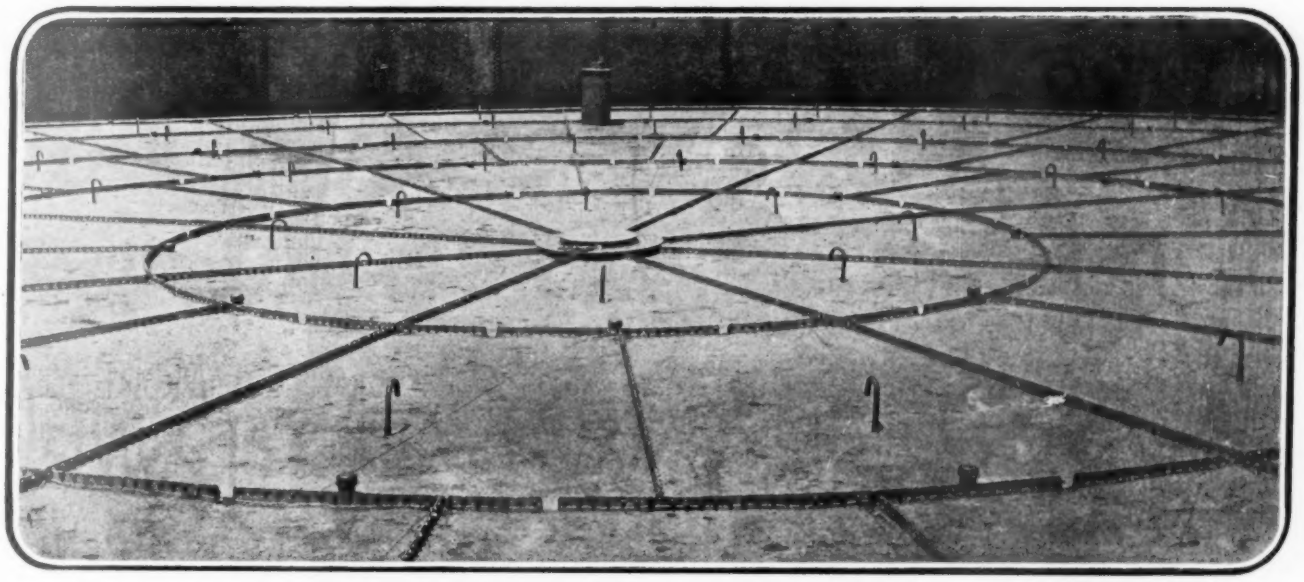


A complete installation of Gallagher *Pontoon* Deck in a 37,000-barrel tank from an actual photograph.

GALLAGHER *PONTOON* DECK

Prevents fire and evaporation.

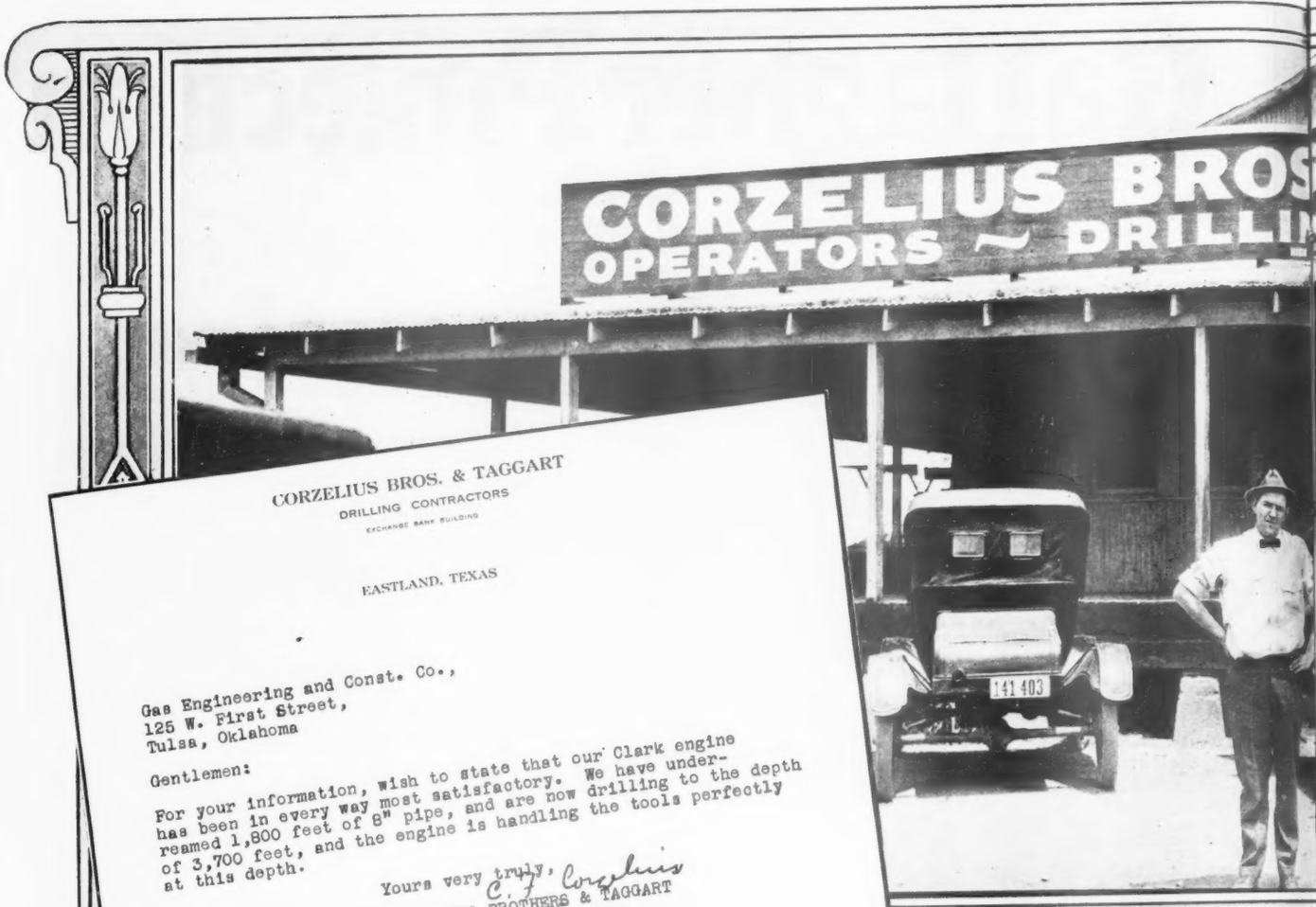
Eliminates breathing and the accumulation of gases and vapors.

Cannot Sink.

The best insurance on earth is - Gallagher PROTECTION

Individual *pontoon* construction permits rapid installation, or dismantling and moving.

The only *pontoon* type of floating deck.



CORZELIUS BROS. & TAGGART
DRILLING CONTRACTORS
EXCHANGE BANK BUILDING

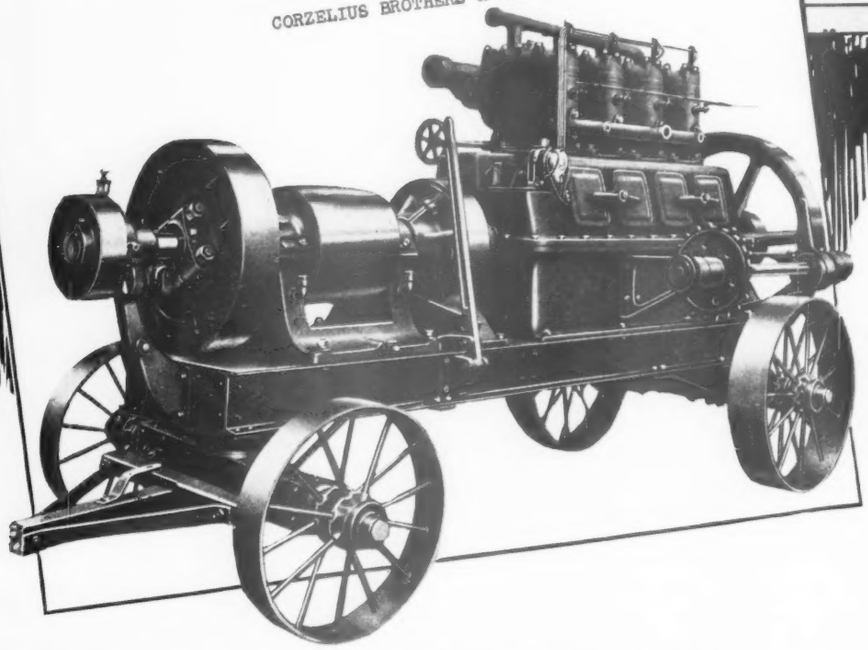
EASTLAND, TEXAS

Gas Engineering and Const. Co.,
125 W. First Street,
Tulsa, Oklahoma

Gentlemen:

For your information, wish to state that our Clark engine has been in every way most satisfactory. We have under-reamed 1,800 feet of 8" pipe, and are now drilling to the depth of 3,700 feet, and the engine is handling the tools perfectly at this depth.

Yours very truly,
C. J. Corzelius
CORZELIUS BROTHERS & TAGGART



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The CLARK CLUTCH
grasps the drilling situation

Following the drop of the tools perfectly, at any depth, the Clark gas or gasoline Drilling Engine, *the master driller*, has established records of savings in fuel and drilling time that are likely to stand until surpassed by another Clark.

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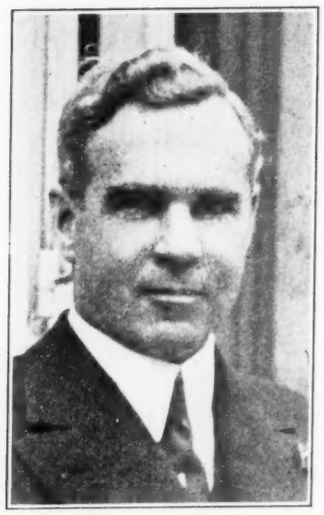
AS ENGINES

MEN KNOWN IN OILDOM



Matthew C. Brush

Matthew C. Brush, chairman of the board of directors of the Barnsdall Corporation, and member of the executive committee of the Simms Oil Company, is one of the foremost executives in America. In addition to his oil interests he is connected as an official or director of major organizations in several other lines of industry.

A recent report showed that he was an officer or director in 47 companies. The list included varied interests such as the American International Corporation, of which he is president and chairman of the executive committee, director of the United States Rubber Company, director, New York Rapid Transit Company, director, Republic Iron & Steel Company, director, Petroleum Chemical Corporation, president and chairman of the American International Shipbuilding Corporation and director of the International Mercantile Marine.

Mr. Brush was born at Stillwater, Minn., and received his high school education in Chicago. Later he received engineering degrees from both Armour Institute of Technology and Massachusetts Institute of Technology. His first employment included newspaper work and clerk of a hotel. Later he was a machinist with the Union Pacific Railway. His advance in railroad work was rapid. He served as general manager of several lines and later became a widely known executive. From railroads his interests gradually widened until now his work keeps him in constant touch with practically all the important industries.

He was made chairman of the board of directors of the Barnsdall Corporation when the corporation was organized early in the year to take over all of the Barnsdall companies. He recently completed an inspection trip of all the Barnsdall and Simms properties in California and Mid-Continent Field.

PERSONAL PARAGRAPHS

S. W. Gregg, an operator of the Bradford (Pa.) fields, was a Tulsa, Okla., visitor recently.

* * *

Eli Josh and Humph Tracey left Petrolia, Ont., recently via New York for the Venezuela fields.

* * *

R. E. Day, manager of the Magneto Ignition Corporation of Tulsa, has been visiting in Ensley, Ala.

* * *

E. R. Sager, geologist of California, has been looking over territory for a local syndicate at Delia, Alberta.

* * *

F. J. Baldwin, of the Refiners Petroleum Corporation, Chicago, Ill., was a recent Shreveport, La., visitor.

F. M. Seibert, chief chemist for the Gulf Refining Company, Houston, Tex., is spending his vacation in Pittsburgh, Pa.

* * *

J. A. O'Connell, formerly with the Ward Chemical Company, has joined the sales force of the Ozark Chemical Company.

* * *

G. C. Schaffer, general sales manager of the Blackmer Pump Company, Grand Rapids, Mich., is visiting the Mid-Continent fields.

* * *

T. B. Slick, oil producer in the Mid-Continent Field, has moved his residence from San Antonio, Tex., to Oklahoma City, Okla.

* * *

Homer H. James of Oil City, Pa., director of the Oil Well Supply Company, recently visited the Alberta fields, en route to Alaska.

* * *

Jess Smith, of the J. E. Shaffer Company of Tulsa, makers of boiler gauge cocks, is calling on the trade in the Texas Panhandle.

* * *

Amos Guthrie, head of the Gypsy Oil Company office at Ponca City, Okla., spent a few days in conference at Tulsa, Okla., recently.

* * *

J. B. Arthur, manager of fuel oil and asphalt sales of the Union Oil Company of California, was in San Francisco recently on business.

* * *

J. C. Beasley, chief geologist of the Mid-Continent Petroleum Corporation, Tulsa, Okla., was in Fort Worth, Tex., this week on company business.

* * *

A. M. Strong, president of the Pacific Oil Tool Company, has recently returned to Los Angeles, Calif., from a tour of the Mid-Continent fields.

* * *

M. J. Flanagan, of the Gaso Pump & Burner Company of Tulsa, Okla., has left for a trip to the eastern states and will attend the Dempsey-Tunney battle.

* * *

J. F. Van Cleve, of the V. K. F. Drilling Company, Shreveport, La., has returned to the offices from a trip that carried him through the fields in New Mexico.

* * *

Harry L. Nolan, sales manager of the Continental Supply Company of St. Louis, Mo., spent some time looking over the company stores in the Mid-Continent Field.

* * *

G. B. Davies, of the sales department of the Louisiana Oil Refining Corporation, Shreveport, La., has returned to his offices following a week's business trip in Chicago.

* * *

Charles P. Gregory, of the Worthington Pump & Machinery Corporation, Snow-Holly Works, Buffalo, N. Y., was in the Bradford, (Pa.) Field recently on a business mission.

* * *

David R. Merril of the Union Oil Company of California, has been transferred from the refinery at Wilmington, and made assistant manager of research and development.

* * *

Joe B. Elam, secretary of the Louisiana-Arkansas division of the Mid-Continent Oil and Gas Association, Shreveport, La., has returned from a brief visit in Little Rock, Ark.

* * *

Vern T. Whitney is now manager of distribution at Toledo, Ohio, for the Paragon Refining Company and has charge of that firm's bulk and filling stations in the Buckeye State.

* * *

J. J. Dailey, formerly with the International Supply Company, has joined the sales force of the Burt Corporation, and will represent it in the west Texas and Texas Panhandle fields.

* * *

General Manager T. S. Cooke of the Standard Oil Company of Indiana, who has been in charge of the plants at Casper, Wyo., will leave within a day or so for the Wind River Mountain range for elk.

* * *

Fred S. Wickham, oil producer in the Bradford Field, has sold out his holdings in that district, and has gone to the Pacific Northwest for a vacation. He was one of the earliest operators in the Bradford Field.

T. G. Madgwick, formerly in charge of the petroleum department of the Birmingham (England) University, has taken over his new duties as Federal petroleum engineer for the Calgary district in Alberta.

* * *

S. F. Shaw, of San Antonio, Tex., general manager of the Cia Minera Nazareno y Catasillas, is investigating conditions of air and gas lifts in the Huntington Beach and Santa Fe Springs fields of California.

* * *

Frank Oliver, in charge of the Gypsy Oil Company land department in Kansas, spent a few days visiting the main office of the company in Tulsa, Okla., last week, and is back at his headquarters at Wichita, Kans.

* * *

I. A. Smith of Tulsa, Okla., buyer of refined products for the Standard Oil Company of Indiana in the Mid-Continent, spent several days in Fort Worth, Tex., visiting his friends among the marketers and jobbers.

* * *

Eugene F. Connors, vice president, and A. W. Duston, chief geologist, of the Independent Oil & Gas Company, have returned from the west Texas oil fields after a trip over their company's properties in the Crane-Upton County area.

* * *

C. C. Magenheimer, vice president of the Santa Maria Valley Railroad, and president of both the Dominion and Sentinel Oil Companies, has just been elected to the board of directors of the Gilmore Oil Company, succeeding C. W. Stone, who recently resigned.

* * *

Neal Lawler sailed September 15, for Maracaibo, Venezuela, as representative of the Pure Oil Company. Mr. Lawler will be remembered as being with the Iroquois Natural Gas Company, United Fuel Gas Company and Arkansas Natural Gas & Fuel Company.

* * *

Roy L. Brown, president of the Roy L. Brown Company, petroleum engineers and producers, has opened an office at 609 First National Bank Building, Fort Worth, Tex. His company specializes in gas lift methods and has operated in California, Oklahoma and Kansas.

* * *

A. W. Robertson, president of the Philadelphia Company and affiliated corporations, has been chosen a director of the Standard Gas & Electric Company. Mr. Robertson recently was elected president of the Philadelphia Company to succeed A. W. Thompson, who resigned.

* * *

Charles E. Krebs, former state geologist of West Virginia, has been appointed engineer in charge of development of the Guardian Coal & Oil Company's properties in Webster County, West Virginia. A gas well is being drilled on a location selected by Mr. Krebs and Dr. I. C. White, State geologist.

* * *

C. E. Enlow, land man for the Texhoma Oil & Refining Company, (Continental Oil Company of Denver) has returned to his office in Wichita Falls, Tex., from an extensive trip through west Texas and southeastern New Mexico. While in that part of the country he purchased considerable acreage for his company along the line of wildcat "play" in Ector and Winkler Counties.

* * *

Harry H. Johnson, lease man for the Gulf Production Company, in the Wichita Falls district, has been made zone agent in the West Texas district, and will maintain offices at Eastland. Mr. Johnson succeeds Nathan Saper, who resigned to enter other business. Mr. Johnson has been in the employ of the Gulf company for several years in the capacity of scout and lease man. He is a graduate of Texas A. & M. College.

* * *

Dr. F. A. A. Van Gogh, chief geologist for the Batnafsche Petroleum Maatschappij of the Royal Dutch-Shell group and in charge of all Shell geological work, has been touring the California fields in company with L. W. Leyds, who is responsible for American work, and Dr. E. F. Davis and Dr. G. Henny of the Shell Company of California. Doctor Van Gogh was particularly impressed with present development work and future possibilities of the San Joaquin Valley.

The Butler Slip Ring Casing Elevator

PATENTS PENDING

An extra strong elevator, made of steel, designed to handle long strings of casing with safety, speed and without injury to the casing.

This elevator does not lift the casing by the top coupling, but has movable slips which work within a heavy steel bowl, engaging the casing and carrying all the load.

All slips are extra long, of correct taper, interlocking and self-aligning. They will engage the outside wall of any make of casing without danger of slippage or crushing, and they release easily.

"OILWELL" ESTD. 1862 TRADE MARK. (REGISTERED)

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The Butler Slip Ring Casing Elevator

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Haley and Holleron
Jones and McClelland Bros.
Drew Beams
Clark and McDougal
C. E. Reynolds
Lucas Drilling Company

TULSA, OKLAHOMA
Ash Brothers
Amerada Petroleum Company
Carter Oil Company
Papoose Oil Company
M. S. Karcher
Douglas Oil Company

OKEMAH, OKLAHOMA
Foster Oil Company
Hudget and Taper

OKLAHOMA CITY, OKLAHOMA
James B. Barnes

PONCA CITY, OKLAHOMA
Marland Refining Company

BLACKWELL, OKLAHOMA
Comar Oil Company
W. C. Waggoner

BARTLESVILLE, OKLAHOMA
Phillips Petroleum Company

WEWOKA, OKLAHOMA
Homaokla Oil Company
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Inquire at Any of Our 100 Branches

FIG. 3

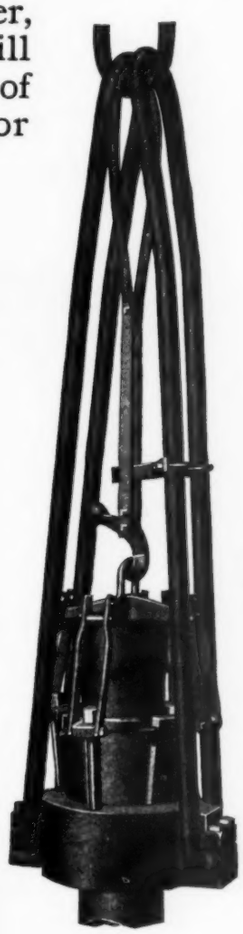


FIG. 2

FIG. 1

Fig. 1 shows the complete elevator with slip hook engaged and with slips raised ready to be placed over or to be taken off the casing. To attach elevator to casing, lower it over top of casing until bracket rests on casing coupling, as shown in Fig. 2. Lowering a little further will automatically disengage the weighted slip hook. Then raise elevator until bowl comes up over slips, as shown in Fig. 3. To detach elevator from casing, lower it and place weighted slip hook in ring on top of bracket, then lift off over top of casing.

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Natural Gas Developments

New Okla. Natural Will Serve 44 Towns and 86,330 Customers

In connection with the flotation of the $6,000,000 bond issue of the Oklahoma Natural Gas Corp. for the purpose of acquiring the assets of the Oklahoma Natural Gas Co., Kingwood Pipe Line Co., Southern Gas Co. and substantially all the assets of the Okmulgee Gas Co., R. C. Sharp, president of the Oklahoma Natural Gas Corp., issued a statement which is of interest.

In his letter Mr. Sharp says in part that the amalgamation of the companies named will constitute one of the largest natural gas systems in the United States, serving either directly or indirectly approximately 86,330 customers in 44 communities. The population of the counties in which the lines of the above companies are located is over 1,200,000, and of the territory served is over 400,000, including the cities of Tulsa, Sapulpa and Okmulgee served at retail and Oklahoma City, Muskogee and Guthrie at wholesale. Oklahoma Natural Gas Corp., in the opinion of S. W. Hayes and D. A. Richardson, attorneys, of Oklahoma City, Okla., will acquire the titles of Oklahoma Natural Gas Co. to its properties through approximate corporate proceedings with the approval or acquiescence of upwards of 97 per cent of the stock of Oklahoma Natural Gas Co.

The Properties

The properties to be so acquired include; leaseholds on more than 126,200 acres, of which over 100,000 acres are proven natural gas reserves; gas purchase contracts covering about 101,935 acres of additional proven reserves; over 1,800 miles of transmission and distribution lines and 9 modern compressor stations. These properties contain over 430 producing wells with an open flow capacity of over 2,000,000,000 cubic feet.

Weld & Liddell, Engineers, estimate that from the above properties and the development of potential resources in other territories (situated in part near existing pipelines) which may be covered by additional leases and gas purchase contracts, there should be available to the Corporation natural gas reserves sufficient for its requirements for a minimum of 20 years.

Earnings

Consolidated net earnings for the years ended December 31, of the properties to be so acquired, available for interest, reserves for renewals, replacements and depletion and Federal taxes, as prepared by Messers. Arthur Andersen & Co., based upon an audit from January 1, 1924 to April 30, 1926, a general review of the accounts for the calendar years 1922 and 1923, and an examination of the financial statements for May and June, 1926, have been as follows: 1926 (year ended June 30, 1926), $3,205,000; 1925, $2,915,981; 1924, $2,766,145; 1923, $1,979,670; 1922, $2,044,195.

MONROE GAS CAPACITY ABOVE 3,000,000,000 FEET

SHREVEPORT, La., Sept. 18.—Although the rock pressure in some quarters of the big Monroe Gas Field was lowered, the field's open flow capacity remains well above 3,000,000,000 feet of gas daily and is in good shape, according to H. L. Williford, chief deputy in charge of minerals division of the Louisiana Conservation Commission.

The statement was made after a survey of the field made two weeks ago during which the rock pressure and open flow capacity of each well was determined. The conservation commission makes a detailed report on the area semi-annually.

At present a new contour map is being made by the commission's engineering department and a new data sheet is being compiled. This work is expected to be completed within the next few weeks for the benefit of producers in the field.

Further reducing the consumption of Monroe gas for the manufacture of carbon black, Dr. V. K. Irion, head of the commission ordered a cut of 31,700,000 feet daily of the gas being used for the manufacture of carbon black. The order was effective September 1, and 243,300,000 feet is now being burned daily. More than 70 per cent of the world's carbon supply is manufactured in Monroe and practically all of the gas drawn from that field goes to the manufacture of carbon black.

The latest reduction is in force until February 28, 1927, when another cut will be made in the quota allowed for the manufacture of carbon black. On March 1, 1927, and until August 1, 1927, the carbon makers will be allowed to use only 211,600,000 feet of gas. Whether another cut will be made at that time remains to the discretion of the conservation commission.

While the over-developed Swartz area in Monroe more than held its own in maintaining rock pressure a falling off in rock pressure and open flow capacity was discovered in the Fairbanks area, Mr. Williford said. Conservation officials believe that the Swartz area pulled from the Fairbanks area and contributed to a large extent in reducing the pressure at Fairbanks.

There are 420 producing wells in the field, according to the last survey, and those making a study of Monroe predict almost twice that many will have been completed when all of the so-called proven territory is developed. Close to a score of wells have been completed during the summer months. Development will be spread over a period of years because of the volume of the field's production and the limited market for the gas. Another big gas line is being built from the field at present.

The Southern Carbon Co., is by far the biggest producer in Monroe. That company has 105 producing wells with an open flow capacity of more than 700,000,000 feet. The Southern, likewise leads in the production of carbon black and the manufacture of natural gasoline. Natural Gas Producing Co. of Louisiana has the largest well in its No. 2 Crossett, which is good for around 50,000,000 feet.

Interstate Natural Gas Co. has 11 wells in the field with an open flow capacity of more than 220,000,000 feet. The Interstate company is building a 22-inch line from Monroe to Baton Rouge, La., and acquired the wells through a recent deal with the Union Power Co.

TRIPLE CYLINDER TANKS DEVISED FOR TRANSPORTATION OF HELIUM

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Sept. 18.—The Army Air Service has devised a new type of helium tanks on railroad cars for the purpose of storing and transporting this lighter-than-air gas used in army balloons and blimps.

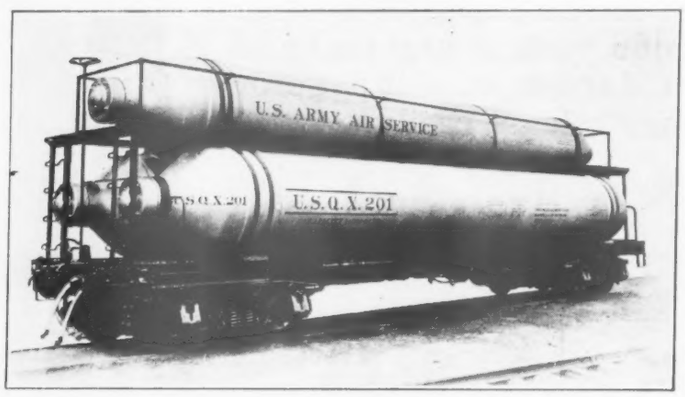
The helium tanks were designed by the army engineers only after various experiments in storing helium in coal mines, subterranean passageways, and in small cylinders. Although these latter means of storing helium were found to be more or less practicable, it was difficult to transport helium efficiently until the railway tanks were invented.

These triple cylinders mounted on railway wheels have a capacity for accommodating 210,000 cubic feet of helium under 2,000 pounds of pressure—or, when visualized in simpler terms a sufficient quantity of gas to inflate an ordiary sized blimp.

Formerly the contents of 1,200 small cylinders were required to inflate an airship of 210,000 cubic feet capacity. Imagine the inconvenience of hauling around 1,200 separate units of gas as a guaranty of the buoyancy of a single airship!

Now the helium-producing plants in Texas may be drafted upon for a carload of this gaseous element and, when coupled to a locomotive, sufficient quantities may be hauled across the continent or wherever airdomes are located. The utility value of these newly built tanks is apparent in peace time but in the event of war such transportation facilities meet a real exigency, according to the Department of War.

As an economy factor, these tanks partly justify their cost since small cylinders are said to represent a loss of 15 per cent through leakage.



All three tanks hold 210,000 cubic feet under 2,000 pounds pressure, or 70,000 cubic feet each. This is enough gas to inflate an ordinary sized blimp. Tanks made by the Bethlehem Steel Corp.

CANADIAN PRODUCERS IN ANNUAL CONVENTION

CHATHAM, Ont., Sept. 18.—The most successful convention in the history of the Natural Gas & Petroleum Association of Canada was held at the Hotel Clifton, Niagara Falls, Ont.

C. E. Steele of Port Colborne, president of the association since it was organized in 1919, occupied the chair, and the visiting delegates were formally welcomed to Niagara Falls by D. A. Coste, president of the Provincial Natural Gas Co., the pioneer natural gas enterprise in Ontario. Mr. Coste is the recognized dean of the Ontario natural gas industry, having developed the first commercial gas production in Welland County 37 years ago.

The financial report of Secretary-Treasurer S. A. Morse of Chatham showed a credit balance of $829.54.

S. B. Severson, of Buffalo, presented the report of the board of directors, showing an unusually harmonious and satisfactory year.

Maj. E. F. Sweet, of Brantford, for the laws and legislation committee, reported that, in contrast with other years, the committee had little to deal with.

The annual address of President C. E. Steele, reviewed the efforts put forth since the association was organized to secure better and more satisfactory conditions in the natural gas industry.

Fraternal greetings were extended to the association by George W. Allan, secretary of the Canadian Gas Association, who urged the possibility of closer cooperation between the artificial and natural gas interests.

George Schofield, new business manager of the Southern Ontario Gas Co., read a paper on "Public Relations and Selling Gas Service" and Joseph McKee, of the Union Natural Gas Co., a paper on "The Work of Leasing and Claims Agent in Relation to the Maintenance of Public Good Will."

These papers were followed by a questionnaire on practical problems of the natural gas industry, conducted by S. B. Severson, general manager of the Southern Ontario Gas Co.

For the nominating committee, Chairman S. B. Severson, associated with P. S. Coate of Chatham and D. A. Coste of Niagara Falls, presented a report recommending the following slate of officers for the ensuing year: President, C. E. Steele, Port Colborne; first vice president, S. B. Severson, Buffalo; second vice president, J. B. McNary, Hamilton; secretary-treasurer, S. A. Morse, Chatham; directors, P. S. Coate, Chatham; E. F. Sweet, Brantford; C. J. Yorath, Edmonton, Alta.; J. A. Richie, Buffalo; E. P. Rowe, Toronto; G. D. Wickett, Windsor.

The officers are all re-elected, except Major Sweet, who was named to succeed H. R. Davis, retired from the board of directors.

The 1927 convention will be held at Windsor, Ont.

GAS FOR SAN ANGELO

SAN ANGELO, Tex., Sept. 18.—The City Commission has granted to Barney Carter of Ranger and associates a 20-year franchise to supply San Angelo with natural gas. Turning on of natural gas here is expected by February 1, barring delays. The gas will be piped from north Coleman County, about 75 miles. The same line will supply Ballinger, which has granted a franchise, and possibly Rowena and Miles. D. C. Boyd of Ranger, an associate of Carter's, announced that the lease on 1,780 acres in northern Coleman County has been purchased. It contains one well now making 22,000,000 feet of gas daily.

Protects thousands of wells thruout the World

Regan Pipe Suspension and Control Head

Why fuss and bother with old style casing or gas packing clamps when you can land pipe and obtain desired suspension with this simple, effective device? If the Regan Control Head and Pipe Suspension accomplished nothing more than to facilitate pipe suspension its value would be worth many times its cost—but it also controls pressure *at all times*, prevents fire, conserves cellar space, eliminates leaks between the strings and gives many other advantages. No operator who has once used a Regan Head has ever drilled a subsequent well without one.

Direct factory service is available thruout the Mid-Continent. Our Field Offices are in charge of experienced men who have specialized for years in pressure control of oil wells and their knowledge is at your disposal. Stocks of various Regan Products carried for immediate delivery.

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San Pedro California

Our Houston Office, in charge of Lew Hilton, is located at 1521 Post-Dispatch Building. Tulsa Office at 227 Mayo Building. New York Office in Evening Post Building, 75 West Street. To serve southern fields we have selected J. W. Allen, with headquarters at Tampico, Mexico, Apdo. 1064.

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For Economy and Results

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WELDED STEEL TUBULAR PRODUCTS

Sizes 1/8" to 24" O. D.

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Southwest Supply Company	Bartlesville, Okla.
Superior Tube Company	Tulsa, Okla.
Atlas Supply Company	Muskogee, Okla.
Hercules Supply Company	Dallas, Texas
Keystone Pipe & Supply Company	Butler, Pa.
McEwen Bros.	Wellsville, N. Y.
Thos. H. Pike Company	Los Angeles, Cal.

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Business View of Petroleum Research

President of Standard Development Co. Discusses Before N. P. A. Progress Being Made in Oil Industry

By Frank A. Howard*
President, Standard Development Co.

From the viewpoint of industry, I would think that a satisfactory definition of what is meant by "research and development work" would be this: "The effort to apply exceptional scientific or technical ability to the betterment of the industry." From the viewpoint of science, a meaning quite different attaches to "research," and of this I would like to speak briefly later.

Statistical information on the cost and extent of the research and development work which is now carried on in the petroleum industry is not available. Resort must therefore be had to estimates, based upon a very little accurate information. My estimate is that the appropriate number of technical men engaged in research and small-scale experimental work within the industry in the United States is 500, and that the budget for this work for the current year is of the order of $5,000,000. It is probable that there are an additional 500 technical men engaged in one phase or another of the larger-scale development operations, and that the annual budget of the industry for this work is twice as great as the research budget. The rough picture, therefore, which is accurate only to the extent that it will give concrete form to our impression of a phase of the industry which has been of enormous importance in the last 20 years, and which is now moving forward with an accelerated motion, is that the time of about 1,000 technical men is taken up and about $15,000,000 per annum is spent in laboratory research, small-scale experimental work, and larger-scale development work bearing on the production, transportation, refining and distribution of petroleum and its products and natural gas.

Let me make it clear that this estimate is only for the purpose of reducing a vague outline to something concrete, and that I would not venture to dispute the matter with anyone who made a widely different estimate. I should rather expect that other estimates would be higher, rather than lower, than the one given above.

Product and Process Control

In order that we may get this phase of the industry oriented a little better, it should be understood that the great bulk of these expenditures are made in what is called the "manufacturing" branch of the business and that the tie-in of the research and development activities with the regular manufacturing activities is so close that the best accounting system cannot make an accurate separation. All manufacturing activities, including the production of natural gasoline as well as refinery operations, require the constant aid of two types of technical services, that is, product control and process control. It is from these routine activities that the research and development programs branch outward. Control of the quality of products carries with it always the thought of improvement in products. Control of manufacturing operations carries with it the thought of better processes and better equipment.

In the smaller units of the industry there could not very well be, and should not be, any effort to clearly separate the functions of research, experimental work and development, from the operating organization of the company. Even in the largest units of the industry, it is the custom to tie these lines and staff technical activities together under a single control, so that there may be no lost motion between parts of the machine which must function together. This community use of men and equipment for manufacturing and for research and experimental work is one thing which makes it so difficult to get any accurate idea of the separate extent and cost of the latter. When we come to deal with the large-scale development work, we run into a similar type of difficulty. Whether a new or modified piece of oil-refining equipment is to be called a development job or whether it is to be regarded as a betterment of plant and charged into plant account or in what manner the cost is to be split between these accounts is sometimes a difficult question capable of final determination only at a time long after the expenditure has been made.

Science and Technology

The distinction between "research" and "development" is roughly the distinction between science and technology. The research worker is typically one who works with so-called "laboratory equipment," involving a minimum of the engineering element. He is seeking to establish some single fact or discover some property or principle or relationship. For example, a typical research problem familiar to most oil refiners is that of determining the chemical treatment required to make a new distillate conform to specifications. The development worker deals with a situation in which the theory or principles are mostly known or in which at least a working hypotheses is available. His real problem is the co-ordination of physical and chemical data with a mechanical design to give the cheapest and best piece of equipment or process which will accomplish the result aimed at. Development is founded upon research and is the step lying between research and practice in most instances, although there are some problems in which straight laboratory research alone gives a result in terms applicable immediately to the requirements of the industry. A typical development problem is the working out of a new type of distillation equipment. Quite clearly, the two fields merge into one another. Any major improvement is likely to involve a steady progression, beginning with a variety of laboratory research problems and finishing up with engineering development work.

Returning to the definition of industrial research and development, an effort to apply "exceptional scientific or technical ability" implies the selection for this work of men who may be expected to meet the qualification. I do not regard industrial research and development work as a profession, but as a business. The difference is this: For a profession, a definite formal training is a requirement; for a business, experience shows that natural gifts may develop without the aid of any formal training. The experience of the oil industry, at least, has abundantly confirmed this impression. It remains true here, however, as in all other fields, that the supply of natural genius is always inadequate to meet the demand, and during the last decade the demand for men for research and development work in the oil industry has been so great as to require the systematic recruiting of personnel. In this systematic recruiting, we substitute the requirement of high average intelligence supplemented by exceptional training or exceptional experience for the requirement of natural genius. By this means we meet our situation, and arrive at the common sense result of employing for research and development work mainly scientific and technical graduates. Among these are a good proportion of men who have had university postgraduate work equivalent to that required for the degree of doctor of philosophy. This means from four to seven years of university scientific or technical training. Such exceptionally trained men of high intelligence make up the bulk of the 1,000 technical men who, it is estimated, are now engaged in research and development in the oil industry.

Two Examples

To round out the picture of the status of research and development in the oil industry at the present time, I should like to give you two examples: One is a very small refinery having only a single responsible chemist. He must take charge of the routine inspection of all products. He must serve as the superintendent's adviser on all treating problems. He must investigate and adjust complaints, and do all of the thousand and one things which the refinery chemist is called upon to do. Carrying this load of regular manufacturing duties, he has simultaneously, with the encouragement of his superiors, successfully conducted an important piece of straight laboratory research work resulting in certain new discoveries relating to the color stability of a class of white distillates. With the assistance of a single young engineer, whose time is mostly taken up with supervising drafting work and construction required for refinery maintenance and for occasional new building, he has carried this research work through the first stages of development and has a very creditable new full-scale piece of distillate-finishing equipment in operation at the present time in the refinery. Some time will elapse before we shall know whether this work will constitute a major step in advance of the refining art or whether it will be merely one of the innumerable variants of standard practice which appear, live their brief life, and disappear. Regardless of the fate of this work, however, this is typical of real constructive research and development work. The amount of work done under such conditions within the industry is very great in amount and of incalculable importance. If the enormous total re-

(Continued on Page 98)

*Before National Petroleum Association at Atlantic City, N. J.

CO-OPERATIVE RESEARCH ESSENTIAL WRITES DIRECTOR GEO. OTIS SMITH

By George Otis Smith
Director, United States Geological Survey

The concluding sentence in the recent report of the Federal Oil Conservation Board is an appeal for conservation in research: "Co-operation of the industry with the Government in planning and carrying out research is necessary, to make full use of all the facilities, resources and personnel available."

With much the same line of thought the American Petroleum Institute makes a plea for economy of effort, foreseeing as it does "an enormous duplication" in the attacks to be made by the companies on research problems that are purely scientific.

"It is, therefore, highly desirable," says the institute's committee on supply, "that some form of co-operation be immediately established among oil companies to make a study of these basic principles in their application to the practical problems of the industry."

Co-operation in petroleum research thus has general support as necessary to avoid wasted effort. But mere economy is not the only argument for co-ordinated research. The need of better methods is so critical that time can not be lost in independent search for first principles by scattered workers. For large and prompt output division of labor is as essential in research laboratories as in an industrial plant.

Co-ordination Demanded

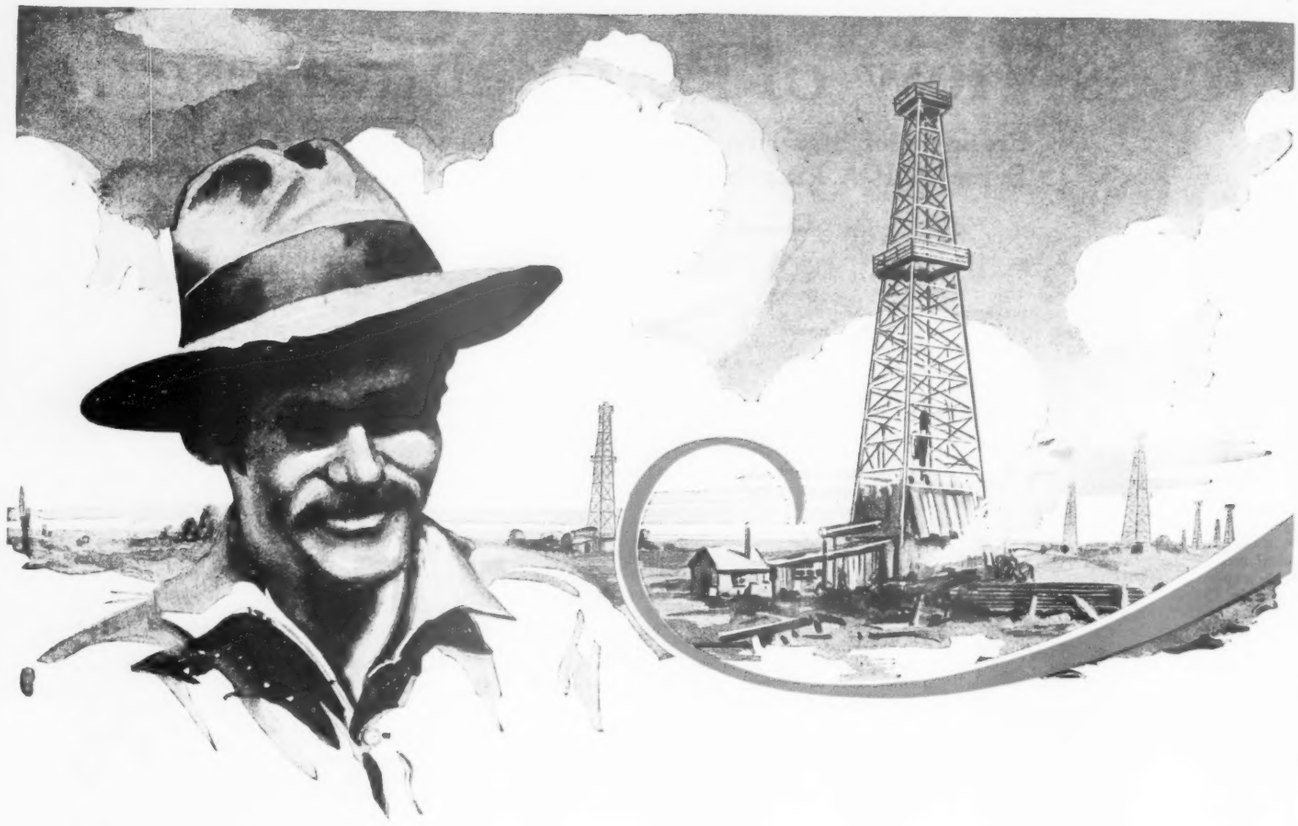
A program of co-ordinated research in which all agencies join—National Research Council, American Petroleum Institute, Government bureaus, oil companies and technical laboratories—is the course demanded, and already there is promise that the demand will be met. Thanks to the vision of the few who have realized this need, the beginning has been made in supplying the funds, though only the beginning. And, which is equally important, the beginning has been made in mapping out the field to be covered and in planning the apportionment of this field of investigation.

Research to be truly successful must insure prompt dissemination of the facts determined. What one searcher learns is needed by his fellows as starting points in their search for more facts. The most serious weakness of unco-ordinated investigation by numerous agencies, especially the reasearch departments of industrial corporations, is the policy of secrecy that prevents publication of results. No one can question the proprietary rights of the one who pays the bills, but such highly individualistic endeavor is not the kind of research which I understand is here under discussion—investigations separately undertaken with the common purpose of benefiting the entire oil industry. Secrecy in industry is getting to be old-fashioned and out of date; it is more practical to exchange information and then to compete in the use made of the common knowledge. This seems to be the thought of the institute's committee in urging co-operation in research among oil companies.

Government's Aid

The large share of research work done in the past by governmental agencies has been generously recognized by the industry, but all have recognized the inability of scientific bureaus with moderate means to keep pace with the expansion of the problems of this rapidly developing industry. One advantage, however, which can be claimed for governmental research is that its results have been widely made known; another large credit to be accorded to the two Federal bureaus which have been in closest contact with the oil industry is the large contribution of trained personnel which has been made to the oil companies, whose research departments can therefore start with an impetus which might otherwise be lacking.

The pioneer stage in oil research is not closed, and problems in abundance remain unassigned. The support for research now promised by the interest taken in the subject by the technical press will be most productive if the journals stress the idea of full co-operation between all agencies and such a co-ordination of their efforts as will promote the determination of the essential facts, at the least expense of time, and the broadest and promptest distribution of these facts for the use of the industry. Under such conditions, best results can be expected from Government bureaus and private companies.



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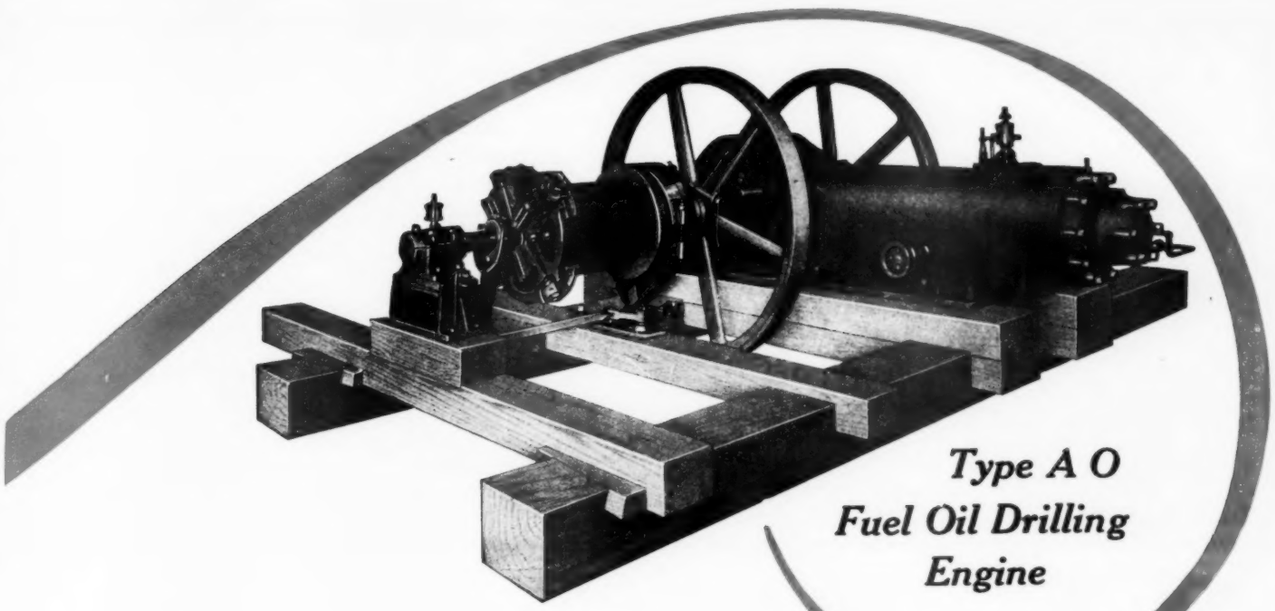

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Oil Fields of the Maracaibo Basin

Characteristics of the Productive Pools and of the Oil Produced. Past Performance and Future Possibilities

By Campbell M. Hunter, O.B.E., M.A., A M.Inst.,C.E., F.R.G.S., F.G.S. (Member)*

The Maracaibo Basin is a horseshoe shaped area, bounded on the west, south and east by mountain ranges, which are offshoots of the main Andean system, and on the north by the Gulf of Venezuela or Maracaibo. Within this area are situated the State of Zulia and parts of the States of Merida, Tachira and Trujillo. Geologically, the State of Falcon also falls within the Maracaibo Basin, though topographically it lies outside to the eastward, between the sea and the mountains which flank Lake Maracaibo on the east. Roughly, the area embraced by the Maracaibo Basin is about 25,000 square miles, or 33,000 square miles if the State of Falcon is included.

The climate and vegetation within this wide area varies considerably, ranging from berren semi-arid districts in the north to dense tropical vegetation in the south.

In addition to the large concessions numberless grants or contracts of 100,000 hectares each have been taken out, with the result that practically the entire area represented by the Maracaibo Basin is now held under exploration or prospecting licenses.

Petroleum Laws

The broad conception of the Venezuelan Government in dealing with its vast potential oil resources has been that of stimulating and encouraging foreign capital to come into the country. The laws relating to concessions have been framed on bold, simple lines, with the result that, within comparatively few years, more active prospecting and development work is taking place in the Republic than in many other countries that have been developing their oil resources far longer.

Briefly, concessions are granted for a period of 40 years, with 3 years given for preliminary exploration work. At the end of the exploration period half of the area under concession has to be turned to the Government and is treated as national reserve. These national reserves are now turned over to a Venezuelan company, called the Compania Anomina Zenezolana de Petroleo, whose policy is to release such national reserves or enter into drilling agreements for their development.

A royalty of 10 per cent on production is payable at the option of the Government either in cash or oil. It is however, provided that this royalty shall not be less than 2 bolivars per ton, or, say, 6 cents United States currency per barrel. In the case of lands situated more than 250 kilometers, say, 150 miles, from the sea or Lake Maracaibo, the royalty is reduced to 7½ per cent.

Geological

The Maracaibo Basin corresponds with a vast geosyncline, the center of which is occupied by Lake Maracaibo. The mountain ranges surrounding the area on the west, south and east are composed of igneous and metamorphic rocks, while the upturned edges of the formations flanking these mountains belong to Cretaceous and Tertiary ages. Around the periphery exposures of Miocene beds abound, their outcrop of about 400 miles around the Basin being marked by numerous oil and gas seepages. Several of these are of great extent, notably that at Mene Grande, which forms a hill rising about 100 feet above the level of the plain and covering an area of 600 acres.

The stratigraphy of the Maracaibo Basin presents many features of interest, to appreciate which it is necessary to consider the general tectonic stresses to which the area has been submitted. A study of the trend of the different structures within the area shows that these have been caused by at least two sets of earth movements—one of which was responsible for the original Andean system, and which in this part of Venezuela has caused the main mountain ranges to run roughly northeast-southwest. while the second set of forces appear to have been exerted from the northward. Where these latter have super-imposed the Andean movement they have resulted either in extensive cross-faulting or in the bending round of the folds until ultimately they assume an east and west direction.

The structures to the west of the Lake, in the Districts of Mara, Maracaibo, Perija and Colon, are disposed in a general north-northeast and south-southwest direction. South of the lake, and north of the Merida Range of mountains, the structures lie parallel with the mountain range, which there runs northeast-southwest. Eastward of the lake, in the Districts of Trujillo and Sucre, and especially in the District of Bolivar, the structures begin to show the influence of the northern or "Caribbean" tectonic system. After being faulted and bent to the westward, the great Mene Grande-Curacao anticline abruptly veers off to the northeastward, after which it assumes an increasingly easterly direction. One of the interesting features of this Mene Grande-Curacao anticline is the development of spurs or lobes at right-angles to its axis, which were brought about by the southward pressure exerted by the "Caribbean" thrust forces. It is on these lateral structures at Ambrosia and La Rosa that the large wells struck by Venezuelan Oil Concessions, Limited, Lago Oil & Transport Corp. and Venezuelan Gulf Oil Co. are situated.

While the conditions attending the deposition of the Tertiary and Cretaceous beds within the Maracaibo Basin would appear to have been ideal, and to have been prolonged without interruption over a considerable period of time, as indicated by the great thickness of the beds, similar conditions would appear to have been present during the period of their compression into the present structures. Thus one of the characteristics of all the structures within the Maracaibo Basin is their great lineal development, coupled with, for the most part, their gentle angle of dip. Owing to massive Quaternary deposits in the District of Perija, west of the lake, it has been impossible as yet to trace the known structures any great distance. But there is strong evidence that these will be found to extend for many miles. Southwest of the lake, the anticlines known as Rio de Oro and La Tarra have each been traced for upwards of 50 miles. Along the Rio Poco anticline, which parallels the Merida Range in the south, oil seepages are reported over a distance of about 100 miles. Eastward of the lake, the Mene Grande-Curacao anticline can be traced for about 60 miles, along which numerous seepages are found. Again, in the State of Falcon, although insufficient geological work has as yet been done to determine the length of the various anticlines, it is probable these will be found to link up into several long parallel folds.

Generally, the peripheral or parallel nature of these structures to the mountain ranges surrounding the lake is highly suggestive that the several folds found wes ward of the central area of the basin will in time be found to have their equivalent expression in the eastern portion of the area. Much valuable light should be thrown on this interesting point when the survey of the lake bottom is completed, as already, soundings taken near the shore have been found singularly helpful in deducing underground structures, both in the La Rosa and Ambrosio areas.

PRODUCTION OF PETROLEUM FROM THE MARACAIBO BASIN

(Barrels)

Year—	Caribbean Petroleum Company	British Controlled Oilfields Limited	Venezuelan Oil Concessions Co. Ltd.,	Venezuelan Gulf Oil Co., Ltd.	Lago Oil & Transport Co.	Total
1920	452,002	.....	.....	.....	.....	452,002
1921	1,429,543	.....	.....	.....	.....	1,429,543
1922	2,187,139	3,583	588	.....	.....	2,191,610
1923	3,524,877	.....	479	.....	.....	3,525,356
1924	4,776,540	1,012,460	2,637,523	.....	414,871	8,839,414
1925	*6,250,000	*3,375,000	*2,300,000	*1,750,000	*4,460,000	*18,135,000
Total	18,620,131	4,391,363	5,938,590	1,750,000	3,874,871	35,572,925

*Productions for 1926 are approximate.

Major Oil Fields

In view of its having been the first to be systematically developed, the Mene Grande Field deserves first mention, though, as regards output, the La Rosa Field is now of greater importance. The Mene Grande Field, which is operated by the Caribbean Petroleum Co., a Royal Dutch-Shell subsidiary, is situated some 12 miles inland from the lake, with which it is connected by means of a narrow-gauge railway. The anticline on which this field is situated extends southward from the great asphalt mountain at Mene Grande, and consistently good results have been obtained along its entire extent. The approximate distance between the more northerly and southerly wells is 5 kilometers (3 miles) while its present east and west width is 3 kilometers (2 miles. No dry holes have as yet been drilled within this area, and large producing wells continue to be struck both to the south and eastward. A striking feature of this field is the remarkable vertical depth of 1,800 feet, down which the oil producing series has been followed, without as yet any indication of edgewater. Up to the end of 1925 some 18,000,000 bbls. of oil had been shipped, equivalent to an average of nearly 315,000 bbls. per well. Of the 60-odd wells drilled to date, four had yielded, to the close of 1925, 398,000 tons, 259,000 tons, 364 000 tons and 108.000 tons respectively; the last well being the southermost on the property, and the production given is that for six months only, at the end of which it was still flowing at the rate of over 700 tons a day.

The wells range in depth between 1,000 and 2,700 feet, and until recently were drilled by cable tools with mud circulation. The rotary system is now displacing the cable tools, and is giving encouraging results.

The oil in the Mene Grande Field is of an asphaltic nature, with a gravity of 16½ degrees Baume, equivalent to .956 specific gravity. The field is connected by two pipeline to San Lorenzo, where the company has a refinery, whence the crude and other products are shipped by lake steamer to Curacao and elsewhere.

La Rosa Field

This field is located on the east shore of the lake, about 27 miles southeast of the city of Maracaibo. Unlike the southern fields, the climatic conditions at La Rosa are good, as it lies just within the semi-arid zone of northern Venezuela. The first well at La Rosa was started in 1915, but no development of any importance took place until 1922, when Barroso No. 2 was brought in at a depth of 1,495 feet, and flowed 1,000,000 bbls. in nine days. The success attaching to this well furnishes another example of the fortune which may attend oil prospectors, since it had been commenced eight years previously and abandoned at a depth of 900 feet. It was only in 1922 that drilling operations were resumed, apparently with a view to utilizing the derrick, which had

(Continued on Page 161)

*Reprinted from the Journal of the Institution of Petroleum Technologists. (London) Vol. 12. No. 56. pp. 235-246.

VENEZUELAN OIL PRODUCTION AND EXPORTS INCREASING STEADILY

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Sept. 18.—Total petroleum of the oil fields of the Maracaibo Lake Basin, Venezuela, amounted to 2,884 486,615 metric tons, and exports from that region totaled 2,682,582,508 during 1925, according to a report of the National Inspector of Hydrocarbon Mines of Venezuela, state advices from Consul A. K. Sloan, Maracaibo, Venezuela, made public by the Department of Commerce. The 1924 production totaled 1,329,783,919 metric tons and exports during that year were 1,211,555 266 metric tons; comparative figures for 1923 were 639,257,479 metric tons and 594,053,465 metric tons respectively, the report states.

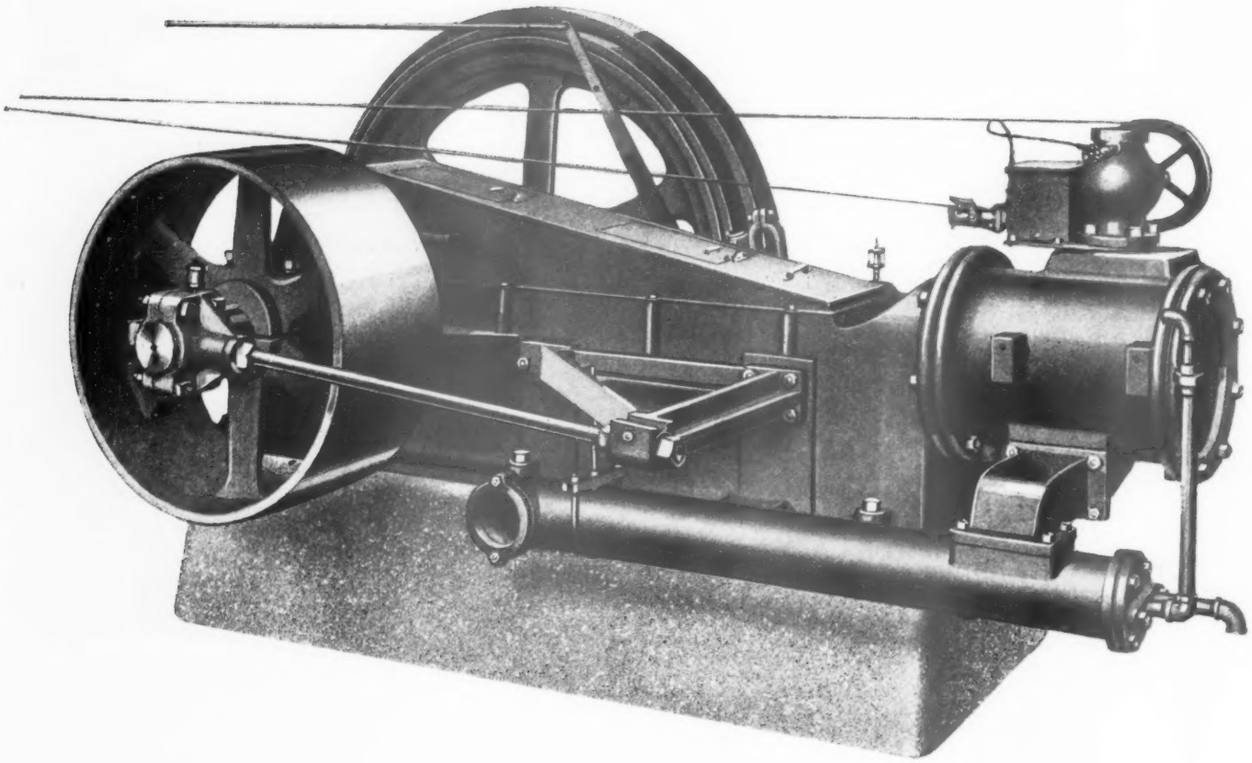
The months of December and November, 1925, witnessed the largest production and exportation of petroleum recorded during the year. Production in December totaled 363,584,637 metric tons, as compared with 343,316 335 tons in the preceding month while exports amounted to 346 633,135 metric tons as against 321,751,215 tons in November.

The petroleum not exported from the Maracaibo Basin in 1925 was disposed of as follows: 14,422,317 liters of gasoline were refined during the year, as compared with 7,293,796 liters in the preceding year; 5,035,551 liters of kerosene were refined, as against 3 822,479 liters in 1924; 1,950,976 liters of gas oil were refined as compared with 907,971 in 1924. Fuel oil used during the year's operations totaled 130,693,720 metric tons, as compared with 76,821,000 tons in 1924.

Although the statistics published by the Venezuelan Government do not show the total importation of oil field machinery, the figures indicating the importation of the general classification of machinery contain the receipts of such equipment. According to the report of the Inspector of Mines the importation of machinery and tools for work of exploration, exploitation, refining and transportation of oil consisted during the year of 720.565 packages having a total weight of 71,994,705 kilos and a value at the ports of embarkation of Bs. 45,447,439.63 (about $8,771,338). In 1924 the importation consisted of 413,159 packages, having a weight of 42,372,529 kilos and a value of Bs. 30,005,432 (about $5.791,048).

XUM

What Makes An



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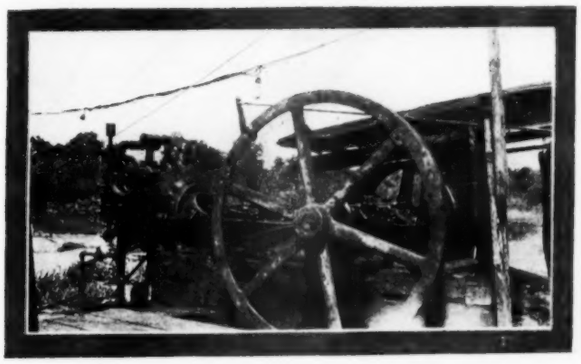

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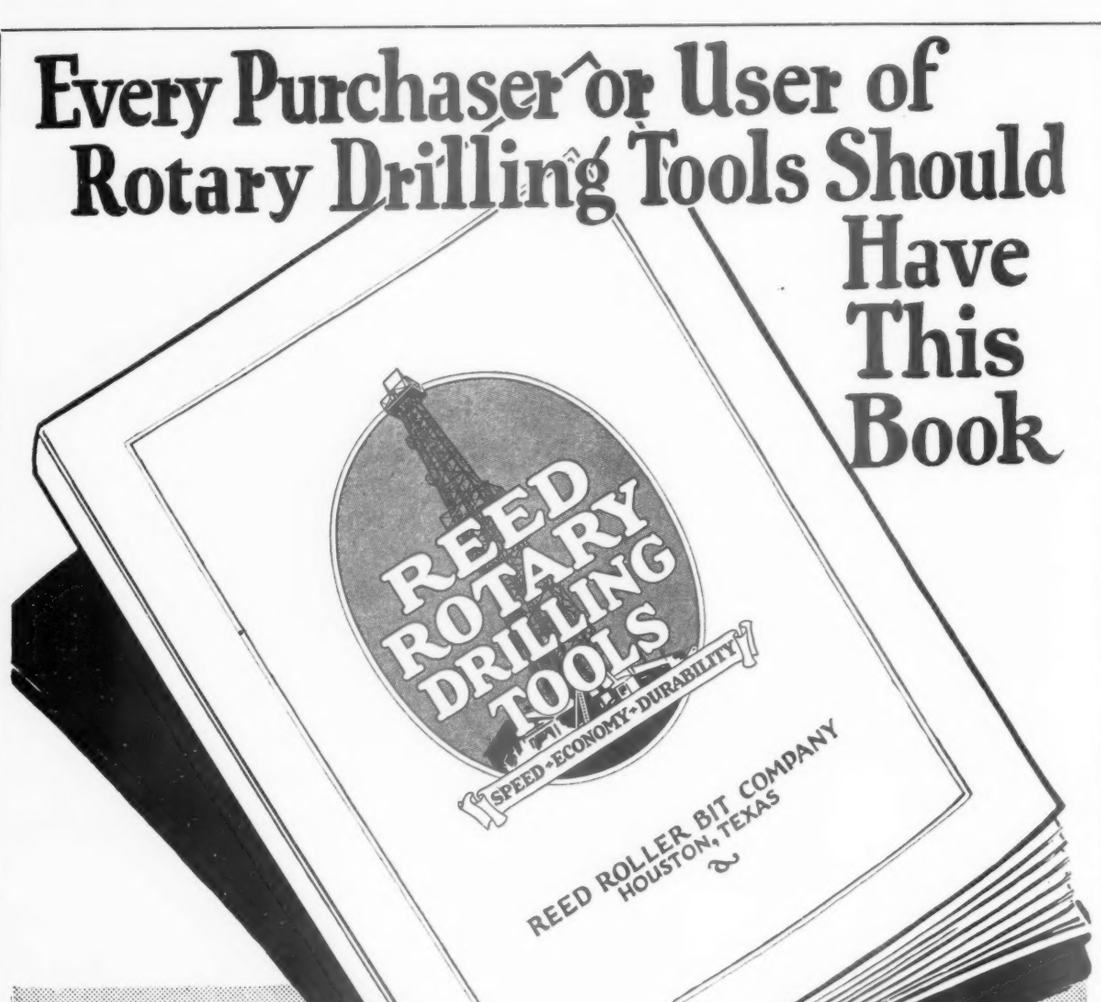

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GULF COAST FIELDS

(Continued from Page 54)

ton Production Co.'s No. 10 Taylor is drilling around 2,235 feet. The Hull Oil Co.'s No. 11 Abel set casing at 2,050 feet and has made a location for No. 12. The Mecom Oil Co.'s No. 1 Seale is drilling around 655 feet.

In the west side extension of the South Liberty Pool, the Humble Oil & Refining Co.'s No. 3 Welder is drilling around 2,875 feet and No. 4 Welder is around 2,110 feet. The Gulf Production Co.'s No. 1 Beckham is drilling below 2,455 feet. The Premium Oil Co.'s No. 1 Mitchell, on the north side of the original pool, is drilling deeper around 4,200 feet. This test was reported abandoned last week at 4,075 feet.

Orange Pool

The Brownie Babbittee Oil Co.'s No. 3 McLean, an old hole drilled deeper in the old section of the pool, came in unexpectedly flowing 2,200 bbls. at 3,650 feet with the drill stem in the hole. Late in the week it had dropped to 1,500 bbls. per day. The Sun Oil Co.'s No. 2 Brown, in the southeast part, will make a pumper after being worked over at 4,500 feet. The Rex Petroleum Co.'s No. 2-B Carbello will make a pumper at 4,020 feet. The Texhoma Oil Co.'s No. 16 Chesson, another workover, is pumping salt water at 4,600 feet. Late in the week the Humble Oil & Refining Co. completed No. 27-B Chesson flowing 700 bbls. of oil and considerable water at 3,600 feet.

The Ryeade Petroleum Corp.'s No. 1-C in Cow Bayou set casing at 3,450 feet. The Texhoma Oil Co.'s No. 9 Chesson is deepening at 3,470 feet. The Orange Petroleum Co.'s No. 7 Chesson is drilling around 3,875 feet. The Gulf Production Co.'s No. 1 McGuire is drilling deeper at 3,500 feet. The Kishi Development Co.'s No. 6 McGuire is idle. The Humble Oil & Refining Co.'s No 2 Winifree is drilling around 2,275 feet. The Supreme Oil Co.'s No. 1 Jackson will be drilled deeper.

Other Pools

In the Batson Pool, the Ada Belle Oil Co.'s No. 109 Texas is bailing at 1,050 feet and the East Batson Oil Co.'s No. 9 Counselman is doing the same at 925 feet.

The Capitol Oil Co.'s No. 2 Hodges, in the deep sand section on the north side, was worked over at 3,325 feet and came back flowing 300 bbls. of oil and water. The Gulf Production Co.'s No. 1 Cruse, on the southwest side, is drilling at 2,900 feet. Its No. 64 Choate is rigging. The Paraffin Oil Co.'s No. 67 Paraffin is drilling around 875 feet with a derrick standing for No. 33 Heywood. S. R. Buchanan's No. 91 Milhome is drilling at 723 feet.

At Barber Hill, Mills Bennett and Humphrey Corp.'s Nos. 4 Barber and 2-B Kirby are drilling. Barclay and Meadows started No. 3 Barber.

At West Columbia, the Hyde Production Co.'s No. 2 Masterson on the northeast flank is drilling around 2,050 feet. The Texas Company's No. 62 Hogg is drilling around 1,560 feet, with a derrick standing for No. 12 Abrams. Both are on the north side.

On the southwest side of the Boling Dome, The Texas Company's No. 2 Felder is drilling around 3,864 feet. On the northeast flank the same company's No. 1 Farmer is drilling around 3,800 feet and the Sun Oil Co.'s No. 1 Farmer is around 1,980 feet.

South Louisiana Pools

In the Vinton Pool, the Vinton Petroleum Co. abandoned No. 17 Vincent at 3,625 feet and the Vinton Oil Syndicate did the same with No. 2 Johnson at 2,900 feet. The Edgerly Petroleum Co. quit No. 11 Vincent at 3,400 feet.

In the Jennings Pool, The Texas Company's No. 102 Latrielle is pumping 10 bbls. at 1,950 feet. Two tests were abandoned. The Coastal Fuel Oil Co. quit No. 92 Crowley at 2,172 feet and the General Oil Co. No. 6 Fontent at 2,430 feet.

In the Edgerly Pool, C. M. Crotty's No. 14 Lilliard is bailing at 1,675 feet.

The Rex Petroleum Co.'s No. 3 Hunter is drilling around 3,325 feet. The Edwards Oil Co.'s No. 4 Landry is rigging to start drilling.

In the Lockport Pool, near Lake Charles, the deep sand proposition where the Vacuum Oil Co. and Gulf Refining Co. are developing jointly, No. 6 Miller is drilling deeper, No. 8 Miller is side tracking at 4,355 feet and No. 10 Miller is reaming at 5,335 feet. A location has been made for No. 12 Miller. Casing was set in No. 4 Lock-Moore at 5,850 feet. No. 1 Bayou d'Inde is drilling around 3,565 feet, with a location made for No. 2. Locations have also been made for Nos. 3 Friedberg and Wolf and 4 Bordages. Casing has been set in No. 1 G. W. Farquhar at 3,725 feet and a location selected for No. 4-A Farquhar.

In Iberia Parish, the United Oil & Gas Syndicate's No. 2 Salt Mine, on the south side of the Jefferson sale dome, is drilling around 4,116 feet in hard sand rock and pyrites, showing some gas. The bit went through 24 feet of pure lignite. The company has locations for several more tests there.

The Vacuum Oil Co.'s No. 1 Angola state farm, West Feliciana Parish, Louisiana, 2 miles east of the Mississippi River and about the same distance south of the Mississippi-Louisiana boundary line, is drilling around 4,300 feet with nothing showing yet.

The Gulf Refining Co. is drilling No. 4 Luther-Moore, south of Stark. The Magnolia Petroleum Co. has entered South Louisiana and is drilling No. 1 Long Leaf Lumber Co. lands in Sabine Parish.

The Sun-Humble companies' joint No. in the Johnson Bayou region of Cameron Parish is drilling around 3,960 feet and the Pure Oil Co.'s No. 3 at Sweet Lake, in the southeastern part of the parish, is below 5,900 feet.

Texas Coastal Wildcats

The Gulf Production Co. abandoned No. 6 Craig off the Hawkins Dome in Matagorda County in gypsum at 360 feet. Its No. 1 Parkinson there is drilling around 3,900 feet. Location made for No. 2 Sanborn.

Brazoria County: Roxana Petroleum Corp.'s No. 3 Allen, Allen Dome, drilling around 1,435 feet. Location made for No. 1 Dunn. No. 3 Clemens Dome, drilling around 2,020 feet. No. 1 is a location. Derrick up for No. 1 Pabst. The Humble Oil & Refining Co. has a location for No. 1 Nash.

Fort Bend County: At Long Point, between Big Creek and Damon Mound, Gulf Production Co.'s No. 15 Davis drilling around 2,700 feet, No. 16 Davis at 787 feet and No. 17 at 990 feet.

Harris County: Kelly and others' No. 1 Lipper, near Aldine, drilling around 3,200 feet. Gwyn and others' No. 1 Cage, near Huffman, shut down at 1,308 feet.

Jefferson County: Fannette Dome, Gulf Production Co.'s No. 2 Bordages drilling below 4,817 feet. No. 9 Thomas around 2,235 feet. Near Westbury, Port Arthur Development Co.'s No. 4, drilling at 1,112 feet. Location made for No. 5.

Wharton County: J. W. Rich and Humphrey Corp.'s joint No. 1 Malone, 5 miles west of Wharton, below 1,790 feet.

Brazos County: J. A. Germany's No. 1, 2 miles southwest of Bryan, spudded in.

Grimes County: Rassmussen and others' No. 2, west of Iola, shut down at 1,150 feet.

Austin County: Valley Oil Co.'s No. 1 Thompson, idle around 900 feet.

Jackson County: Wright Brothers' No. 4 Drusbell, east of the Lavaca River, drilling. Same No. 1 Calassum, drilling. Location for No. 1 Felst, near Edna. Norton and others' No. 1 Fenner, drilling around 1,900 feet. It is in the northern part of the county.

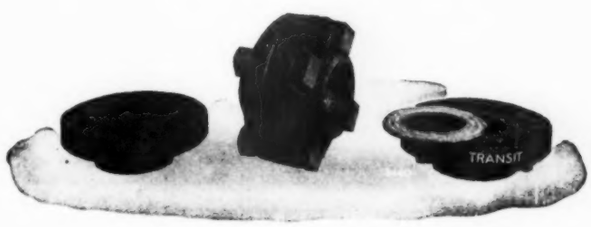
The Clear Lake Oil Co. is drilling No. 16 Coulter in the Rockdale-Minerva shallow sand field in Milam County. The Chicago Oil & Land Co.'s No. 1 White is drilling, as is Messer and Kolster's No. 1 Berry and Sterlsky and others' No. 2 fee.

Waller County: Rem Oil Co.'s No. 2 Maxwell, drilling.

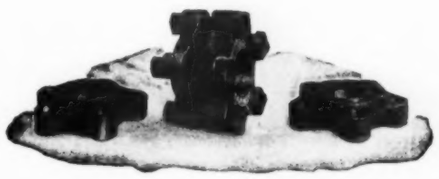
Angelina has a shallow "gasoline well."

TRANSIT

4 & 5 Bolt Unions



Popular and economical 4-bolt flange unions manufactured and sold in large quantities, for pressures up to 1000 lbs. Circular corrugations are cast on the gasket faces of both flanges. The corrugations interlock when the two halves are bolted together and make a stiff, tight joint. Gaskets ¾″ wide and 1/32″ thick.



This 5-bolt flange union was designed especially for use on oil and water lines, where considerable bending, twisting or contracting strains exist, or in installations where considerable vibration is present. The female half of this union has a machined seat for the gasket which is ½″ wide and 1/32″ thick.

Ask for Circular 1358 on these Unions.

NATIONAL TRANSIT
PUMP & MACHINE CO.
OIL CITY, PA.

DISTRICT OFFICES

New York Philadelphia Pittsburgh
Cleveland Houston Tulsa Denver

drilled by P. D. Kimmey near Huntington. It is reported pumping 10 gallons from 14 feet, the well being walled with brick. It was originally a water well.

Glasscock and others' No. 4 Tiller in the Luling Field is pumping 75 bbls. from 2,125 feet. The hole was drilled in 11 days. The lease comprises 30 acres and is in litigation, a Lockhart banker acting as receiver.

OKLAHOMA FIELDS

(Continued from Page 44)

cor. SE NW, Section 27-3-5w. Sand was at 1,526-56 feet and the well is shut in with 22,000,000 feet of gas. No. 1, NE cor. SE SW, Section 27-3-5w, had sand at 1,481-1,509 feet, and swabbed 30 bbls. the first day. It is now pumping 30 bbls. No. 2, SE cor. SW, Section 27-3-5w, had sand at 1,467-85 feet and pumped 10 bbls. No. 2, SE cor. NW NW, Section 27-3-5w, pumps 30 bbls. from sand at 1,727-35 feet. Briscoe & Hall's No. 1, SE cor. NW SE, Section 34-3-5w, had sand at 1,467-75 feet and is estimated at 600 bbls. It is not completed.

New Work

Little Nick Oil Co. has made a location for No. 3 Farewell, SE cor. NE SE, Section 26-5-8w. Nichols Drilling Co. has set the surface casing at 50 feet in No. 3 Chandler, NE cor. SE, Section 27-5-8w. Magnolia Petroleum Co. has made a location for No. 4 Birt, SW cor. NW NW, Section 11-5-9w. The Carter Oil Co. has made a location for No. 1 Ridlay, NE cor. NW NW, Section 17-3-5w, and also for No. 1 Howard, NE cor. SW, Section 21-3-5w. No. 1 Miller, SW cor. SW, Section 22-3-5w, is drilling at 200 feet. Magnolia Petroleum Co. has built a standard rig for No. 2 Cochrun, SE cor. SW SW, Section 27-3-5w. Joe Anderson and others have rigged up a rotary for No. 1-A Abernathy, NE cor. SE SE, Section 28-3-5w. Briscoe & Hall have a rig on the ground for No. 3 Abernathy, NW cor. SE, Section 34-3-5w. Magnolia Petroleum Co.'s No. 3, SE cor. NE NW, Section 34-3-5e, is drilling at 475 feet. Carter Oil Co. has made a location for No. 1 Cross, NE cor. NW SW, Section 35-3-5w. No. 1, SW cor. NW, Section 35-3-5w, is drilling at 1,216 feet. Magnolia Petroleum Co. has a location made for No. 3 Welch, SE cor. NW, Section 11-4-8w.

Beckham County

Magnolia Petroleum Co. is drilling at 230 feet in No. 1, CEL NE NW, Section 22-9-23w.

Carter County Completions

Amerada Petroleum Corp.'s No. 26, SW cor. NW SE, Section 20-5s-1, made 35 bbls. naturally from sand at 1,604-30 feet. Humble Oil & Refining Co.'s No. 5, NW cor. NE NW, Section 19-1e-3w, had broken sands at 2,744-3,307 feet and is estimated at 40 bbls. an hour. No. 5, SW cor. SE NE, Section 33-1s-3w, had sands at 2,448-2,626 feet with the pay at 2,529-50 feet, and made 320 bbls. naturally. Magnolia Petroleum Co.'s No. 3, NW cor. NE SE, Section 33-1s-3w, had sands at 2,218-2,660 feet with a total depth of 2,688 feet, and made 147 bbls. the first 24 hours. No. 6, CEL NE SE, Section 33-1s-3w, had sands at 2,200-2,870 feet, and made 10,000 feet of gas and 140 bbls. the first day. No. 4, SW cor. NE SW, Section 34-1s-3w, had sand at 2,925-50 feet and made 389 bbls. the first day. No. 3, SE cor. NW SW, Section 34-1s-3w, had sands at 2,405-3,068 feet and made 80 bbls. Prairie Oil & Gas Co. and Wirt Franklin's No. 4, SE cor. NW, Section 3-2s-3w, had sands at 1,948-2,263 feet and is flowing 290 bbls. Wirt Franklin's No. 1, SW cor. NE, Section 3-2s-3w, had broken sands at 1,975-2,235 feet and made 547 bbls. Pure Oil Co.'s No. 2, NE cor. SE NE, Section 12-2s-3w, had sand at 2,101-10 feet and made 220 bbls. It is not completed. Magnolia Petroleum Co. has a gas well in No. 10, SW cor. NE SE, Section 23-2s-3w. Sand was 1,336-38 feet and the well is making 22,000,000 feet. No. 1, SW cor. NW NE, Section 23-2s-3w, had sand at 3,025-39 feet and made 12 bbls. Carter Oil Co.'s No. 2, SW cor. SW, Section 8-2s-2w, made 15,000,000 feet of gas in sand topped at 1,893 feet. Magnolia Petroleum Co.'s No. 2, SE cor. SE, Section 16-2s-2w, is estimated at 20 bbls. in sand at 1,015-1,260 feet. No. 3, NE cor. NE, Section 21-2s-2w, is pumping 35 bbls. from sand at 1,335-50 feet.

New Work

Magnolia Petroleum Co. has moved in a rig for No. 2 Adams, SW cor. NE SE, Section 3-2s-3w. The rig is up for No. 3 Adams, NE cor. SE, Section 3-2s-3w. Wirt Franklin has spudded No. 7, SE cor. NW SW, Section 22-2s-3w. Magnolia Petroleum Co.'s No. 12-A Latham, SW cor. SE NE, Section 23-2s-3w, is drilling at 1,000 feet. The rig is up for No. 5 Latham, NW cor. SW NW, Section 23-2s-3w. No. 8, NE cor. SW NE, Section 23-2s-3w, is drilling at 300 feet. The location is made for No. 1, SW cor. SE, Section 14-1s-3w. Humble Oil & Refining Co.'s No. 7, Luck, NW cor. SE NE, Section 33-1s-3w, is drilling at 1,200 feet. The rig is built for No. 8 Lusk, SE cor. SW NE, Section 33-1s-3w. Magnolia Petroleum Co. has made a location for No. 6 Lyles, SW cor. SE, Section 34-1s-3w. Skelly Oil Co. has moved in a rig for No. 4 Smith, SW cor. NW SE, Section 3-2s-3w. A rotary is being rigged up for No. 3 Smith, SE cor. NW SE, Section 3-2s-3w. Humble Oil & Refining Co. has made a location for No. 1 Lyles, SW cor. NW SW, Section 2-2s-3w.

Noble County Completions

Mid-Co. Oil Co.'s No. 15, NE cor. SW NW, Section 22-23-2w, had sand at 2,003-23 feet and is pumping 2 bbls. water. Champlin Refining Co.'s No. 1, SW cor. NW, Section 26-22-2w, is dry and abandoned at 5,448 feet. Magnolia Petroleum Co.'s No. 1, SW cor. NW, Section 15-21-2w, is dry and abandoned at 4,622 feet.

Tulsa County Completions

Devonian Oil Co.'s No. 16 Baker, NW cor. SE SW, Section 9-21-13, had the Bartlesville sand at 1,154-85 feet and made 20 bbls. after a shot of 120 quarts. Echo Oil Co.'s No. 5, C NW SW, Section 7-20-13, made 12 bbls. after a shot of 160 quarts in the sand found at 1,260-1,301 feet.

New Work

Tidal Oil Co.'s No. 9 Coudrey, SE cor. SW, Section 1-20-12, is drilling at 440 feet.

NEXT SALE OFFERS GOOD WILDCAT PLAY

(Continued from Page 29)

sale, while other powerful producing units content themselves with the bargains or stay away altogether.

Burbank Only Big Field

Only one great field has ever been developed in Osage County. It is the oldest of the producing counties in the state, but it is not the greatest. Creek County far surpasses it. When the Burbank Field was opened in 1921 by the Marland Refining Co. in the northeast quarter of Section 36-27-5, which lease cost the company $2,000 at one of the first sales of wildcat acreage on the west side, Osage County was producing around 50,000 bbls. a day. The Hominy district was developing some whacking big producers in scattered places and was the most talked-of territory in the county. The east side had never developed any fields that would be called big ones nowadays, although some of them, particularly the Avant Field, covered a large expanse of productive territory. Burbank really made the Osage Nation and converted the occasional routine auction sales of leases into romantic and dramatic spectacles, which moved the whole oil world to wonder and the general financial world to amazement and sometimes incredulity.

The Burbank Field has been a great oil producer. Its total of 104,175,517 bbls. in Osage County and 21,332,690 bbls. in Kay County, a grand total of 125,450,207 bbls., places it among the world's greatest high-grade oil fields, and yet with all that Burbank has done the total production of Osage County in its best year, 1924, was less than 39,000,000 bbls., while one corner of Creek County, the Cushing-Shamrock Field of say 10,000 acres, produced 70,000,000 bbls. in 1915.

Enormous Prices per Acre

While Osage acreage may not be as desirable as leases in some other parts of the state, the Osage Indians have got more money per acre from oil men for their undeveloped land than any other class of people anywhere. If there is a spot in all Oklahoma, now or in the past, that is or has been considered worth $12,437.50 per acre before a well has been drilled on it, we have never heard of it. The Osages got that price for one lease and they did so because several companies very much desired that particular 160 acres of land and it was bid up to that average, which made the Osages $1,990,000 richer. And another quarter section went for $12,218.75 per acre and yet another brought $11,656.25 per acre and 21 quarter sections, aggregating 3,360 acres, or more territory than is included in the Mexia, Powell and Wortham Fields combined, were paid for by oil companies at the average price of $8,615.18 per acre before ever a location was staked—purely on blind faith that they were worth it. Some of them were. Others were not worth much more than the price of the drilling.

Some Rare Bargains

There is another side of the story, however. We have told it in The Oil and Gas Journal before. This time we will present it from a new angle. It has to do with the Burbank Field. There were bargains—wonderful bargains—picked up by representatives of the Carter Oil Co., the Sinclair Oil & Gas Co., the Gypsy Oil Co., I. D. Simons, the Devonian Oil Co. and the Twin State Oil Co. Six quarter sections were purchased at early sales for an aggregate of $4,200 or $4.37 per acre, which have yielded 5,226,847 bbls. of crude oil.

The 21 highest priced quarter sections were bought for $28,947,000, the 21 lowest priced leases were bought for $58,300.

Now, see where the operators came out who paid the high prices as compared with the purchasers of the bargains. The 21 leases that cost $28,947,000 or $8,615.18 per acre, have produced 31,213,943 bbls. The 21 leases costing $58,300 or an average of $14.37 per acre have produced 21,160,002 bbls.

The bargain buyers paid $143.70 cents per well location (10 acres) and the locations averaged 211,600 bbls. For every dollar of bonus money paid the Indians they got 5,276 bbls. of oil in return. Now, note this tremendous difference: The purchasers of the 21 most expensive leases which cost $86,152 per location got 1.08 bbls. for every dollar of bonus money they paid. The 21 biggest bargains paid back over 5,000 times as much oil per dollar of bonus as the 21 highest priced properties.

Indeed, there were some bargains in Burbank.

Good Wildcat Play

At the coming sale there will be put up at auction a considerable number of properties that are in the same class as the above 21 Burbank bargain leases were when they were bought. Nothing is known of their potentialities aside from the geological report on them. Nothing more was known of Burbank's greatest bargains. You pay your money and you take your chance.

The map published in The Oil and Gas Journal of September 2, page 144, showed the acreage for sale on September 30. It is worthy of study. The east side of the county has been so well explored and exploited that it is an open book to operators familiar with Osage County. The west side is yet a great mystery, with abandoned tests, widely scattered as the only index of what may be expected nearby.

The Burbank leases to be offered include the NW and SE quarters of Section 1-27-5, NE and NW quarters of Section 7-27-5, NE and SE quarters of Section 20-26-6, SW quarter of Section 22-26-6, NE and NW quarters of Section 28-26-6, and the NE quarter of Section 29-26-6. A number of Fairfax tracts will come in for consideration and scattered wildcat tracts in over a dozen townships on the west side will be put up for bids.

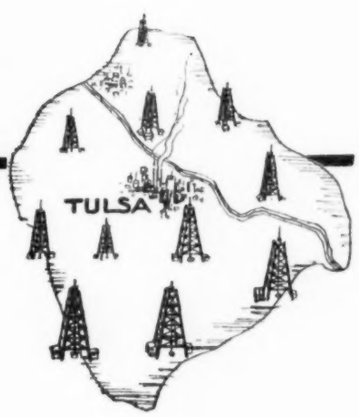
CRUDE PRODUCTION BY LEASES
Production of the Burbank Field in Osage and Kay Counties, Oklahoma, from its beginning in May, 1920, to September 1, 1926

Location	Date of first production—	Bonus Price	No. Wells	Total Prod. Bbls.
Carter Oil Co.—				
NE 12-26-5	September, 1922	$ 325,000	5	174,685
NE 26-26-6	March, 1925	42,000	10	273,539
NW 21-26-6	March, 1925	176,000	16	685,857
NW 12-26-5	November, 1922	500,000	12	5,528
SE 5-26-6	February, 1921	500	16	1,191,863
SE 8-26-6	March, 1922	351,000	16	735,206
NE 8-26-6	November, 1921	300,000	16	713,126
NE 9-26-6	November, 1920	500	10	621,221
NW 9-26-6	September, 1920	3,600	6	491,405
SW 9-26-6	January, 1921	3,000	11	918,092
SE 9-26-6	February, 1921	3,000	16	1,099,034
NE 13-27-5	September, 1924	230,000	16	583,463
NW 16-26-6	December, 1920	5,400	16	914,131
NW 13-27-5	September, 1924	405,000	16	241,185
SW 16-26-6	June, 1923	385,000	16	977,676
SE 1-26-5	January, 1921	5,200	13	1,413,304
SE 16-26-6	June, 1923	127,000	15	713,237
NW 11-27-5	September, 1924	310,000	16	1,026,276
NE 22-27-5	June, 1923	1,025,000	16	2,472,710
NW 17-26-6	November, 1922	235,000	6	163,696
SW 31-27-6	February, 1921	7,100	16	822,420
SE 31-27-6	February, 1921	3,000	15	885,245
NE 33-27-6	August, 1922	160,000	1	5,813
	Total	$ 4,602,300	296	17,070,506
Comar Oil Co.—				
NE 2-26-5	November, 1922	410,000	7	284,395
Mid-Continent Petroleum Corp.—				
SW 14-27-5	May, 1924	1,790,000	18	381,752
NE 6-26-6	November, 1921	310,000	16	671,596
SE 14-27-5	May, 1924	1,955,000	16	698,583
NW 8-26-6	December, 1921	115,000	16	617,103
SW 8-26-6	April, 1922	300,000	15	398,352
NE 17-26-6	May, 1922	500,000	16	571,693
SE 17-26-6	June, 1923	11,000	11	457,170
	Total	$ 4,981,000	106	3,796,519
Devonian Oil Co.—				
SW 5-26-6	April, 1921	700	16	966,047
Gypsy Oil Co.—				
NW 5-26-6	May, 1926	500	15	959,466
NW 7-26-6	August, 1922	175,000	7	39,344
SE 3-27-5	May, 1924	151,000	7	80,605
NW 24-27-5	March, 1923	1,310,000	16	2,888,400
SE 25-27-5	September, 1922	1,600,000	16	2,256,002
NW 19-27-6	March, 1923	1,100,000	16	1,450,524
SE 19-27-6	September, 1922	1,050,000	16	1,711,609
SW 28-27-6	June, 1922	280,000	9	444,225
NW 28-27-6	December, 1922	205,000	1	335
SE 28-27-6	August, 1922	61,000	1	9,092
NW 29-27-6	September, 1922	1,000,000	16	1,240,321
NE 31-27-6	January, 1921	1,300	16	1,571,555
NW 32-27-6	January, 1922	226,000	18	883,689
NE 10-27-5	June, 1923	33,000	16	1,033,533
SE 22-27-5	June, 1923	670,000	11	711,877
NE 23-27-5	June, 1923	1,195,000	16	1,603,122
	Total	$ 9,058,200	195	18,882,098
Kewanee Oil & Gas Co.—				
NE 4-26-6	March, 1922	205,000	10	409,978

A square peg for a square hole . . . a specific type of finish for each purpose

IN dealing with the finishing problems of so complex an industry as the petroleum field, we believe it is not sufficient to offer an honestly good product and hope for its acceptance on the basis of its merits alone.

Rather—that the full fruits of industrial research and an analytical method should be brought to bear; that specific finishes, of good quality and relentless uniformity, should be adapted to those uses for which they have been proved most effective—and that it is the duty of the paint company to ascertain, to the full extent of its research and technical knowledge, just what type of finish *is* most effective for each separate purpose in the petroleum field.

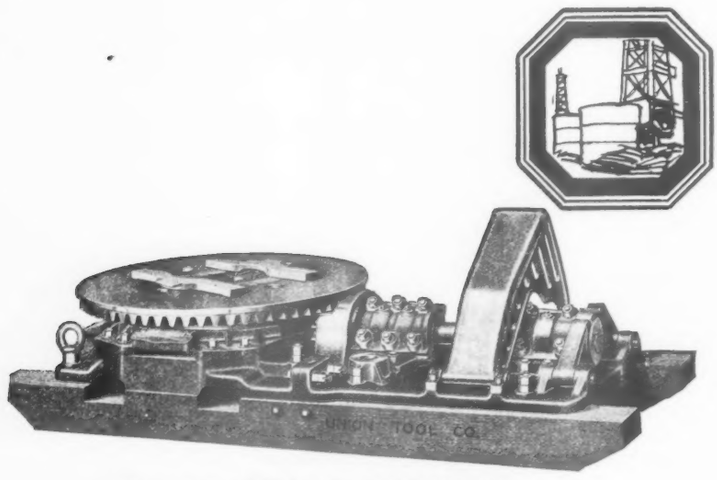


To this end, the du Pont Company offers to executives in the petroleum industry the services of the Petroleum Finishing Service, backed by the largest chemical research staff in the paint industry. The services of the Petroleum Finishing Service are, of course, free. Inquiries are invited. E. I. du Pont de Nemours & Co., Inc., Chemical Products Division, Parlin, N. J., Tulsa, Okla., or Chicago, Ill.

DU PONT

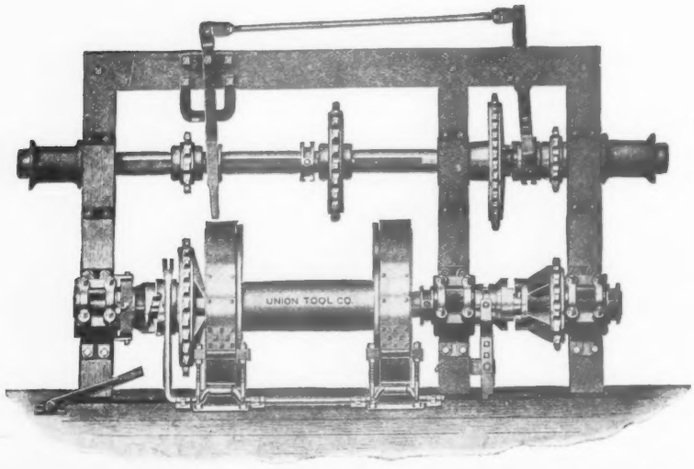
A du Pont finish for every surface

IDEAL



No. 10 IDEAL ROTARY

IDEAL UNIVERSAL 18½—2



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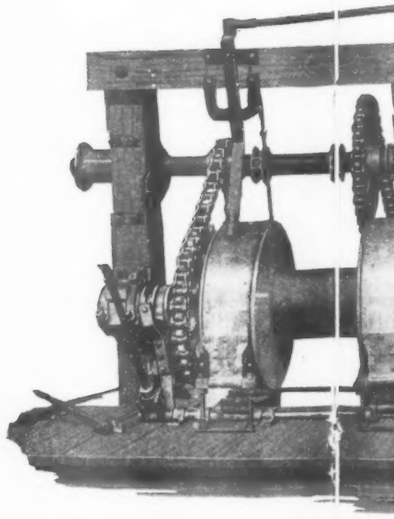

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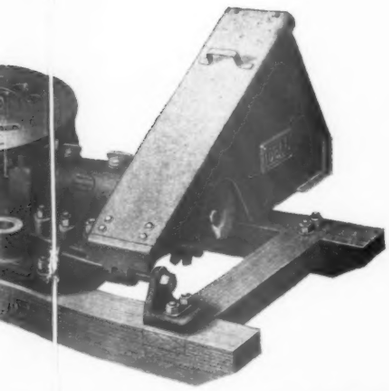
THE NATIONAL SU

ROTARIES AND DRAW WORKS



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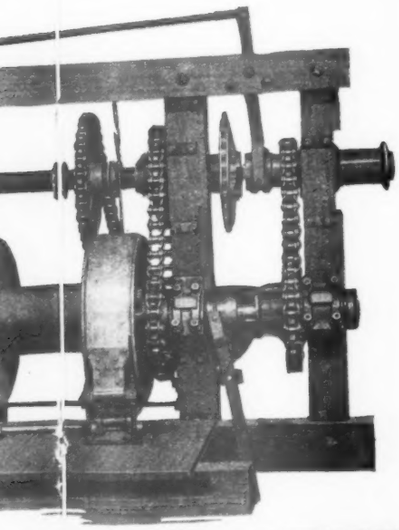
IDEAL UNIVERSAL 20—24 INCH ROTARY



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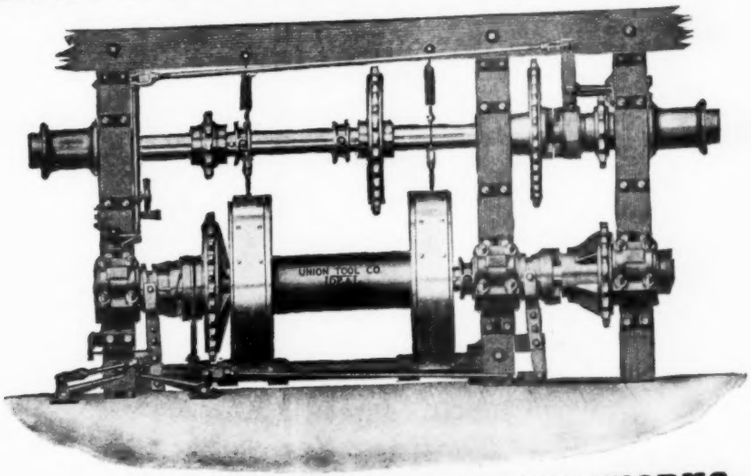
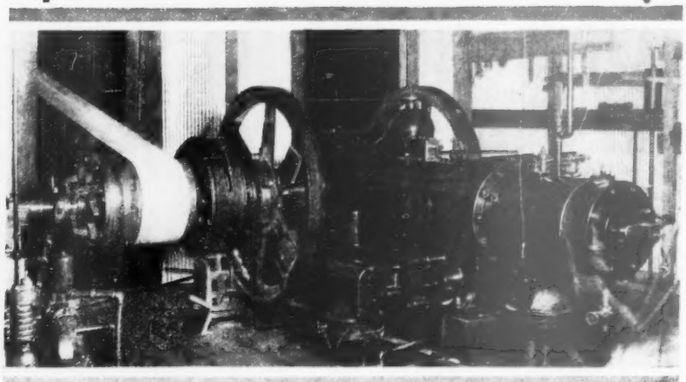


No. 5B IDEAL ROTARY DRAW WORKS

SUPPLY COMPANIES

PRIMM
OIL ENGINES



DRILLING

With the "PRIMM" does not mean that you need learn new tricks. The telegraph wheel and reverse lever are exact duplicates of those on the old steam rigs, and are operated from the derrick in exactly the same way.

The best performance of the steam engine is duplicated by the "PRIMM" Oil Drilling Engine with the additional benefit—SAVING.

Send for bulletin of drilling engine.

QUALITY PRIMM ENGINES

the POWER MANUFACTURING CO.

722 Cheney Avenue

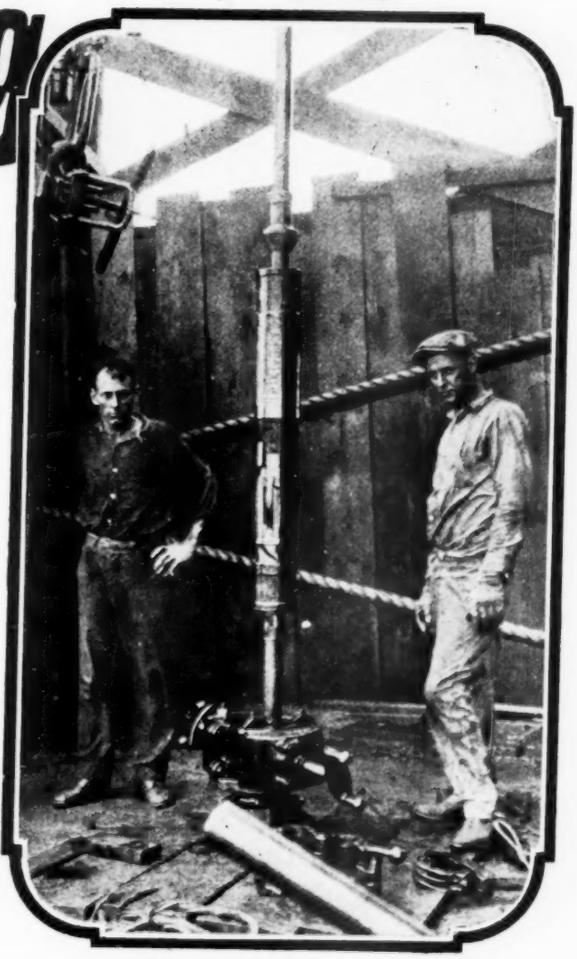
MARION, OHIO

Location	Date of first production—	Bonus Price	No. Wells	Total Prod. Bbls.
SE 7-26-6	November, 1922	275,000	2	23,562
SE 18-27-6	May, 1924	285,000	14	239,246
NE 34-27-6	July, 1926	300	1	38,101
	Total	$ 785,300	27	710,888
Laurel Oil & Gas Co.—				
NW 1-26-5	May, 1921	3,000	16	891,342
Lewis Oil Co.—				
NE 21-26-6	March, 1925	99,000	15	495,628
SE 21-26-6	May, 1926	321,000	9	81,557
	Total	$ 420,000	24	577,185
Lorraine Petroleum Co.—				
SE 6-26-6	February, 1922	100,000	15	503,913
Midland Oil Co.—				
SE 13-27-5	April, 1924	1,580,000	16	591,646
NW 15-26-6	May, 1922	61,000	5	214,268
NW 14-27-5	May, 1924	1,990,000	16	438,381
	Total	$ 3,631,000	37	1,244,289
Phillips Petroleum Co. and Delmar Oil Co.—				
SE 10-27-5	June, 1923	41,000	16	2,350,232
Mid-Kansas Oil & Gas Co.				
SE 35-27-5	October, 1922	665,000	13	779,815
SE 33-27-6	April, 1922	115,000	3	99,524
SE 15-27-5	June, 1923	1,325,000	16	1,352,869
NW 26-27-5	June, 1924	670,000	10	369,345
NW 22-26-6	June, 1926	29,000	3	4,781
SW 35-27-5	August, 1926	12,000	1	1,922
	Total	$ 2,816,000	46	2,598,266
Phillips Petroleum Co.—				
SE 2-27-5	July, 1925	6,000	14	817,418
NE 11-27-5	March, 1925	335,000	16	717,178
NW 12-27-5	May, 1925	216,000	16	915,859
SW 12-27-5	February, 1925	335,000	16	1,047,011
SW 17-27-6	September, 1925	31,000	2	35,657
SW 11-27-5	May, 1924	1,765,000	16	2,126,187
NE 35-27-5	October, 1922	495,000	12	493,088
NW 20-27-6	June, 1924	75,000	6	88,326
NW 23-27-5	June, 1923	1,005,000	16	1,899,338
SW 32-27-6	October, 1921	305,000	16	1,004,364
SE 11-27-5	September, 1924	505,000	16	1,514,170
NE 14-27-5	September, 1924	225,000	16	243,586
NE 12-27-5	May, 1926	625,000	14	290,514
NE 18-27-6	September, 1924	51,000	16	673,726
NE 2-27-5	June, 1926	366,000	1	40,747
SE 26-27-6	July, 1924	24,000	7	165,371
SW 7-27-6	May, 1926	120,000	12	102,529
SE 7-27-6	May, 1926	222,000	4	97,432
SW 21-26-6	May, 1926	526,000	12	100,331
SE 20-26-6	May, 1926	110,000	3	20,685
SW 1-27-5	June, 1926	710,000	3	118,664
	Total	$ 8,355,000	280	12,512,178
Phillips Petroleum Co. and Skelly Oil Co.				
NE 7-26-6	May, 1922	155,000	8	271,615
SE 23-27-5	April, 1923	1,101,000	14	1,269,865
NE 21-27-5	March, 1923	1,245,000	16	2,054,105
SW 24-27-5	October, 1922	1,005,000	16	2,158,651
NE 25-27-5	June, 1922	1,335,000	16	835,000
NW 25-27-5	June, 1922	1,160,000	16	899,626
SW 25-27-5	February, 1922	6,100	16	830,575
SE 25-27-5	August, 1921	52,000	16	953,762
SE 26-27-5	November, 1922	805,000	13	510,192
NE 26-27-5	January, 1924	310,000	14	591,327
SW 19-27-8	September, 1922	1,585,000	16	1,914,729
NE 29-27-6	September, 1922	600,000	12	864,050
NW 30-27-6	April, 1922	663,000	16	804,328
	Total	$10,022,100	183	13,957,725
Prairie Oil & Gas Co.—				
SW 15-26-6	May, 1925	25,000	16	26,761
SE 12-27-5	May, 1925	200,000	16	722,512
SW 8-27-6	October, 1925	10,000	1	222,817
NW 4-26-6	October, 1922	360,000	16	1,108,858
NW 10-26-6	October, 1921	200,000	5	625,873
SW 10-26-6	December, 1921	200,000	5	464,947
NE 30-27-6	March, 1922	700,000	16	920,562
SE 30-27-6	December, 1921	250,000	16	728,592
SE 32-27-6	March, 1922	800,000	16	1,176,032
SW 33-27-6	April, 1922	600,000	16	794,192
SW 13-27-5	May, 1924	1,825,000	16	971,193
	Total	$ 5,300,000	139	7,862,535
Peters & Oliphant—				
NW 17-27-6	October, 1923	82,000	4	298,834
Producers & Refiners Corp. and Marland Oil—				
NE 16-26-6	January, 1922	136,000	13	442,763
Producers & Refiners Corp.				
NW 31-27-6	November, 1920	2,100	16	1,486,099
Roxana Petroleum Corp.—				
SW 4-26-6	February, 1921	251,000	12	1,102,179
Roxana Petroleum Corp. and Marland Oil Co.—				
NW 6-26-6	April, 1921	6,600	15	573,445
NE 36-27-5	May, 1920	2,000	14	1,619,677
SE 36-27-5	December, 1926	7,000	13	584,526
	Total	$ 15,600	42	2,777,648
Simons, Moore and others—				
SW 1-26-5	February, 1922	3,100	13	436,256
NE 5-26-6	April, 1921	800	16	1,231,403
	Total	$ 3,900	29	1,667,659
Seamans and others—				
SW 17-26-6	February, 1926	5,200	1	1,141
Sinclair Oil & Gas Co.—				
NE 1-26-5	May, 1921	5,800	15	1,132,961
NE 15-27-5	June, 1923	800,000	16	1,618,341
SW 36-27-5	October, 1921	1,500	17	1,426,069
NE 19-27-6	March, 1923	615,000	16	549,786
SW 20-27-6	March, 1923	415,000	16	717,664
SW 29-27-6	March, 1922	650,000	16	952,903
SE 29-27-6	June, 1922	410,000	16	1,069,005
NE 32-27-6	March, 1922	600,000	16	1,041,759
NW 33-27-6	June, 1922	300,000	16	512,495
	Total	$ 3,797,300	141	9,060,878
Skelly Oil Co.—				
SW 2-27-5	April, 1925	10,500	8	53,396
SW 26-27-5	July, 1924	295,000	4	58,184
SW 23-27-5	June, 1923	740,000	15	921,567
NW 35-27-5	July, 1924	295,000	4	73,204
NW 2-27-5	April, 1926	68,000	2	60,422
	Total	$ 1,418,500	33	1,166,873
Tidal Osage Oil Co.—				
SE 4-26-6	October, 1921	95,000	11	590,131
SW 6-26-6	February, 1921	206,000	16	789,093
	Total	$ 301,000	27	1,379,224
Tidal Osage and Carter Oil Co.—				
SW 30-27-6	August, 1921	26,000	15	1,033,950
Twin State Oil Co.—				
SW 18-27-6	May, 1925	805,000	16	629,818
NW 36-27-5	February, 1921	800	8	256,847
	Total	$ 805,800	24	886,665
The Texas Company—				
NW 18-27-6	September, 1924	141,000	16	404,446
	Total Osage County	$57,223,600	1,732	104,175,517

KAY COUNTY

			Bbls.
Conar Oil Co.—			
S½ SW, 4-27-5		2	5,091
N½ SW¼ 10-27-5	May, 1922	8	1,206,192

This Well Stopped Flowing



Because this well had been allowed to flow through the casing, the gas pressure had been rapidly dissipated until it was no longer capable of forcing the oil to the surface through the large diameter pipe. The well was swabbed, but to no avail.

It was then determined to set a string of tubing. A GUIBERSON Control Head Packer was used to procure a gas-tight pack between tubing and casing. The well was then swabbed through the tubing. It immediately began to flow and has flowed steadily since.

A GUIBERSON Tubing Oil Saver was used while running the Packer, to prevent any damage or loss of oil which might occur due to a possible head accumulating.

The scientific way to flow a well is through tubing. This imprisons the gas and causes it to raise the *maximum* amount of oil. The GUIBERSON Control Head Packer provides a passage for oil and gas between the tubing and packer, while being run, and can thus be run in against heavy flows.

"Better Be Safe Than Sorry"

The well is on the lease of the Marileen Oil & Gas Co., Garber. The men are H. E. Gilley and L. J. Nelson

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
CALIFORNIA BRANCH: 1506 Santa Fe Ave., Los Angeles

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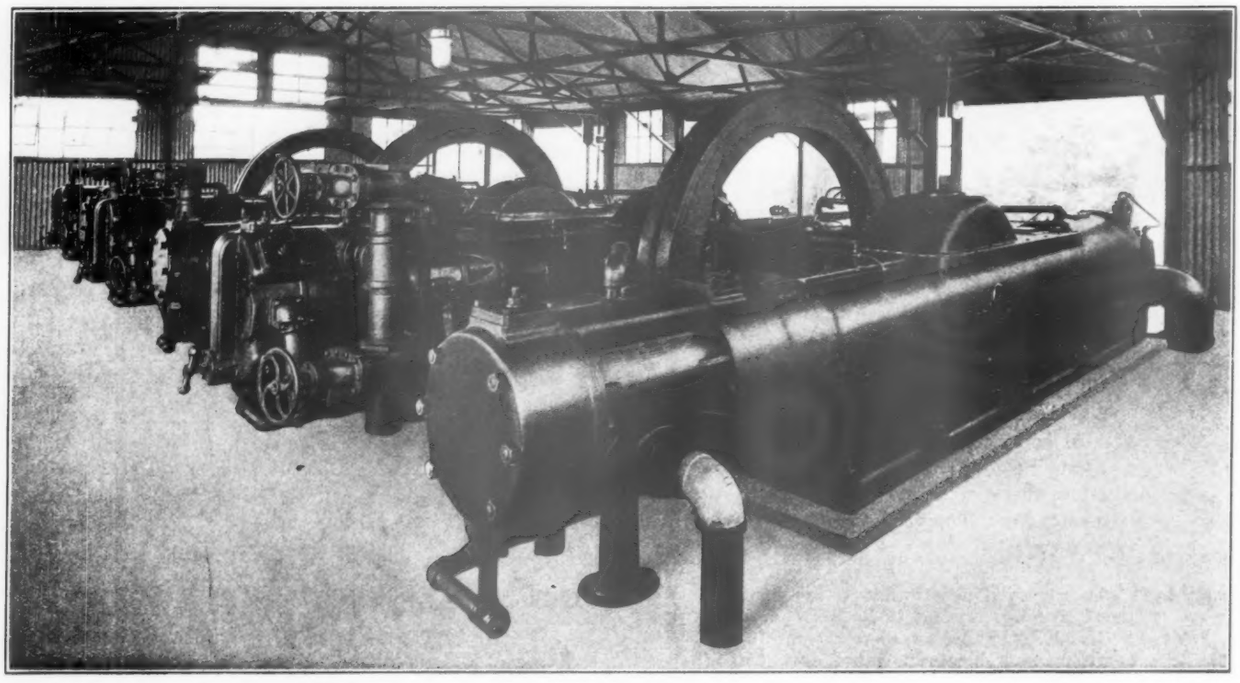
GUIBERSON
BETTER BE SAFE THAN SORRY

"Taking Out the Uncertainty"



This is another Two-Stage High Pressure Plant that is daily forcing millions of feet of air into the oil sands, driving out the oil and increasing production by many barrels. This releasing of oil from the oil sands as the rock pressure decreases has been a practical possibility for over fourteen years. That it is financially successful, is proven by the fact that there are thousands of horse power of Watts-Miller Units operating in this service, where they are as favorably known as they are in Gas Boosting and Natural Gasoline Plants.

The Miller Improved Gas Engine Company
Springfield, Ohio

Location	Date of first production—	Bonus Price	No. Wells	Total Prod. Bbls.
N½ SW 15-27-5	April, 1923	$		1,227,655
S½ NE, 21-27-5,	April, 1923		1	43,519
	Total		19	2,672,427
	Total			2,672,427
	Dye & Tomlinson—			
S½ SW 15-27-5,	January, 1923		8	1,058,603
	Mid-Kansas Oil & Gas Co.—			
N½ NE, 21-27-5,	March, 1923		2	61,495
N½ SE 9-27-5,	May, 1923		8	1,845,644
	Total		10	1,907,139
	Phillips Petroleum and Skelly Oil—			
W½ SW 9-27-5,	July, 1924		1	16,688
SE 16-27-5,	April, 1923		7	206,808
W½ NW 22-27-5,	March, 1923		8	249,032
S½ SW 22-27-5,	June, 1925		1	112
E½ NW 22-27-5,	May, 1923		8	852,439
	Total		25	1,325,079
	Twin State Oil Co.—			
NW 15-27-5,	April, 1923		15	1,578,856
	Carter Oil Co.—			
S½ SW 10-27-5,	June, 1923		8	2,016,998
SW NW 3-27-5,	January, 1924		3	128,476
	Total		11	2,145,474
	Mid-Continent Petroleum Co.—			
NW 10-27-5,	May, 1923		16	1,837,038
	Gypsy Oil Co.—			
W½ NW 4-27-5,	September, 1924		1	1,491
SE 4-27-5,	May, 1923		16	1,233,610
E½ NW and NE SW 16-27-5,	May, 1923		2	1,295
	Total		19	1,234,905
	Phillips Petroleum Co.—			
N½ and SE NW 3-27-5,	May, 1924		2	10,136
NE¼ and N½ NW 9-27-5,	August, 1923		19	2,741,696
S½ SE 9-27-5,	May, 1923		8	1,468,818
W½ NE 16-27-5,	August, 1923		3	315,394
	Total		32	4,536,044
	Sinclair Oil & Gas Co.—			
E½ SW 9-27-5,	May, 1923		5	491,411
	George S. Bole—			
E½ NW 4-27-5,	August, 1923		3	506,762
	Laurel Oil & Gas Co.—			
N½ SW 4-27-5,	August, 1923		5	216,965
	Prairie Oil & Gas Co.—			
S½ NW 9-27-5,	January, 1924		4	350,021
	Pure Oil Co.—			
E½ NE 16-27-5,	August, 1923		4	327,246
	Roxana Petroleum Corp.—			
NE 4-27-5,	August, 1923		8	484,028
	The Texas Company—			
SW 3-27-5,	October, 1923		16	615,692
	Total, Kay County		200	21,334,181
	Grand Total, Burbank Field		1,932	125,509,698

W. W. SPLANE'S BUSY CAREER IN OIL AND GAS ENDED BY DEATH

OIL CITY, Pa., Sept. 18.—William Williams Splane, prominent oil producer and widely known citizen of Oil City, died at the West Penn Hospital, Pittsburgh, at 8:30 o'clock Thursday evening after having suffered a stroke several days before. He was en route from Oil City to Pittsburgh by auto when stricken, but retained consciousness long enough to direct the way to the home of relatives in Pittsburgh. He was later removed to the West Penn Hospital, where he died without having regained consciousness.

At the bedside at the time of death was his wife; Mrs. Blinn Page of Detroit, Mich., a daughter; Mr. and Mrs. Howard S. Splane of Tulsa, Okla., the former a son, and J. G. Splane of Detroit, a brother.

The funeral will be held here Sunday, services at Christ Protestant Episcopal Church.

Mr. Splane represents the third generation of a family which was founded in Pennsylvania by George Splane, a native of Nova Scotia, who brought his family from St. Johns to Pittsburgh a century ago, where he was a large owner of real estate and engaged in the furniture business.

Old-Time Pipe Liner

In early years William W. Splane became a devotee to electrical appliances, beginning his career as a messenger boy at the age of 15, during which time he quickly learned telegraphy. Showing remarkable proficiency, he became telegraph operator in the early days of Petrolia, Millerstown and Bradford, and by the time he was 21 years old was made superintendent of the telegraphic department of the National Transit interests in Bradford. He put up the first telephone in that city, which connected the United Pipe Line office with Gilmor, becoming later chief electrician and general superintendent of the telegraph department. In August, 1890, he was transferred to the Oil City offices of the company, where he remained until 1904, when he severed his connections with the Standard Oil Co. and entered the oil and gas business independently, continuing to make Oil City his home.

Prominent in Gas Industry

Following his leaving the National Transit Co. he became interested in the Manufacturers Light & Heat Co., in which he was influential for some time. Then he bought out the oil interests of Frank Taylor at Plumer and also helped to organize the Union Gas Co.

At the time of his death, Mr. Splane was a director of the executive committee of the Ohio Fuel Supply Co. and the Oklahoma Natural Gas Co. He also was serving on the boards of the Alum Rock Gas Co., Mahutska Oil Co., Devonian Oil Co., Mahustka Mining Co., Oil City Trust Co., Oil City Hospital and Red Cross. He was a big worker in the recent consolidation of several companies into the Ohio Fuel and also the Oklahoma Natural Gas Co.

He was a member of the Masonic Lodge of Bradford, the Wanango, Venango and Oil City Boat Clubs of Oil City and the Duquesne Club of Pittsburgh and Christ P. E. Church of Oil City.

In the Church of the Ascension, Bradford, Mr. Splane on October 12, 1887, was married by Rev. David B. Day to Minnie Elizabeth Ball. To them were born the following children: Mrs. Charles D. Berry, who died November 15, 1918; Mrs. Charles R. Galbreath, Jr., Franklin; Mrs. Blinn Stephen Page of Detroit, Mich.; Alvin William Splane, who was killed in the United States aviation service December 16, 1918; Howard Scott Splane, Tulsa, Okla.

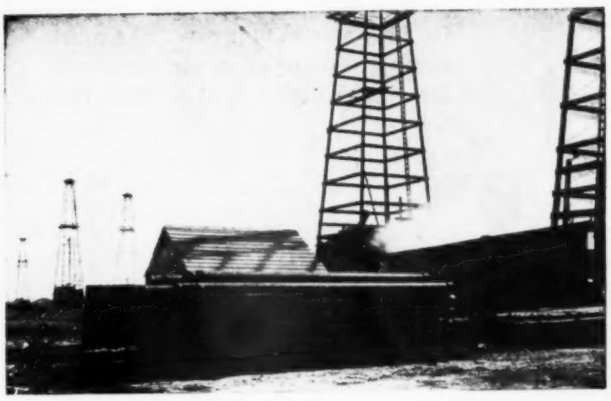
INCREASED FUEL EFFICIENCY

WASHINGTON, D. C., Sept. 18.—Class I railroads were the most efficient on record in the use of fuel by locomotives during the first six month this year, the Bureau of Railway Economics announced yesterday. An average of 142 pounds of fuel was required in the first six month in 1926, to haul 1,000 tons of freight and equipment, including locomotive and tender a distance of 1 mile.

DAN NOLAN DEAD

LOS ANGELES, Calif., Sept. 18.—The many friends of Dan Nolan, chief geologist of the General Petroleum Corp., will be grieved to learn of his untimely death in San Francisco, due to a sudden heart attack.

Ready to Serve Your Requirements



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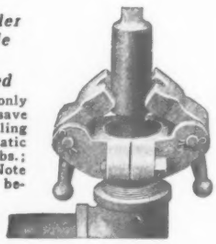
Long Stroke Beam Hanger for pumping wells. Especially adapted for long stroke pumpers. The most complete hanger made and will last indefinitely. Full adjustment.

Sucker Rod Spider and Bell Nipple Combined
Open and Closed

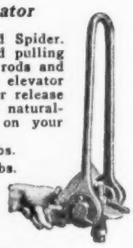
With this you need only one elevator and save 50% of your pulling time. Action automatic and sure. 2-in., 10 lbs.; 2½-in., 15 lbs. Note high speed elevator below.



High Speed Elevator

For use with Sucker Rod Spider. The most satisfactory rod pulling outfit made. Avoids bent rods and lost time. Rods cradle in elevator body and will not kink or release accidentally. Snaps on as naturally as placing your hat on your head.

Light pattern, 12 lbs.
Heavy pattern, 15 lbs.



Stuffing Box

The lightning T. S. Lubricator Stuffing Box satisfies under the most adverse conditions.

Manufacturers of

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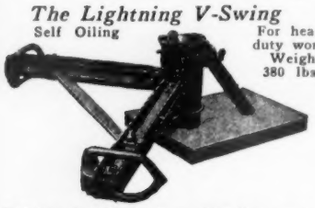
Stuffing Boxes
Steel Grips
V-Swings, Jacks
Polished Rod Rotators
Casingheads
Casing and Tubing Hooks
Polish Rod Clamps

The Lightning V-Swing
Self Oiling



For heavy duty work. Weight 380 lbs.

V-Swing is adjustable so that legs may be at 90° or closed to 45°.

Rod and Tubing Hook

All-Steel, Extra Heavy. Ball bearing swivel, automatic safety latch and hinged body.

Made in 3 sizes, 24", 30", 34".

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Write for showing of full line.

Kansas City Hay Press Co., Kansas City, Missouri

TYPE OF STILL TO BE INSTALLED AT REFINERIES DEPENDS ON USE

*By H. S. Bell

We have spent a great deal of time and energy in an effort to improve conditions in our boiler houses. The net return is expressed in one measure, the coal pile. I want to draw attention to another department where there is a field of even more promise, your stills. Here, not only is there an opportunity to save fuel but increased yield, greater throughput and better quality of products all offer promise of more profits.

The first stills were small castiron or steel kettles with a condenser worm in a wooden tank. The kettles were charged, fires lighted and the products separated at the condenser outlet. The cheese box still was evolved, the kettle on a bigger scale. The short travel of flue gases was a recognized disadvantage so that the horizontal cylindrical still was a natural outcome. This still gave more flue gas travel and heating surface per barrel and was a safer piece of equipment.

The oil was still batched down and cuts were managed in the same way. About 1900 some larger companies started running this type of stills continuously. Six, eight or more stills were connected together and the oil was pumped through in series. Each still carried a progressively higher temperature and the streams from each were of constant specification. This was a decided step forward as it gave an opportunity for heat exchange. The hot residual was used to heat the ingoing crude oil. By use of modern towers this type of installation will make very close cuts. Equipment may be installed to take the waste heat from the flue gases, bringing the thermal efficiency up as high as 60 to 70 per cent.

About 1912 the first installations making use of waste vapor heat were tried in this country. The first equipment adopted bodily from European practice, was clumsy and expensive. Development was rapid and we now have very satisfactory apparatus.

When the California oil fields came in great difficulty was experienced from the high percentage of water. It was found that passing the oil through tubes at a temperature sufficient to evaporate the water and then putting it through an expansion chamber to allow water and evolved vapors to escape was a practical solution. Thus the pipe or tube still came into existence.

Now let us go back to the batch still, review its deficiences and see where and how the modern continuous battery and pipe still correct them.

Batch Still Inefficient

The batch still is inefficient from a fuel standpoint. It must be. We rarely find one over 25 per cent and usually they are between 15 and 20 per cent. Why? Two big reasons. First, the flue gas temperature must be 200 to 300 degrees above the oil temperatures. When running to stock this results in flue gas temperatures of 800 or 900 degrees. Then you do not dare run very high combustion chamber temperatures so you let in lots of excess air. Second, there is absolutely no chance for heat exchange. The bottoms must be pumped out quickly to make room for a new charge. Even if you did attempt to use some of the heat from the vapors into what would you put it?

The batch still is a very poor piece of fractionating equipment. You make many cuts and to get your finished products you rerun cuts galore. We often find that for every barrel of crude run two barrels of semirefined cuts find their way back to the stills for rerunning. We term this 200 per cent rerun. All of this takes up still capacity and uses fuel, steam power and labor.

Now a lubricating plant cannot get away from some batch running of oils. When you want a test on a residual product it has to be batched down and for reducing neutrals, stripping naphtha from bright stock and similar uses the batch still has its place. We find that the Pennsylvania refiner should get along very nicely on 75 to 80 per cent rerunning. In other words for every barrel of crude charged to his stills he will have to rerun .75 to .8 of a barrel of semirefined oils. From the nature of the work this amount is practically unavoidable.

Very little can be done to improve conditions in the typical batch still. A better designed setting with plenty of combustion space will help some. Attention to air leaks will also aid. Avoidance of air leaks at the points where still and brickwork touch is quite a problem. We now have expansion cushions that overcome this trouble to a large extent.

Longer flue gas travel is an aid. Some recent stills have been designed with return tubes like an H.R.T. boiler. Such practice cannot be applied to a still running to less than 50 per cent bottoms, however, so that the principal use of stills with internal flues is confined to continuous batteries.

Continuous Operation

A method of operation holding considerable merit is the semicontinuous system. A still is charged with a small amount of oil and started up. The oil being run is then fed into the still continuously through a vapor heat exchanger. This is continued until the still is full of oil to the desired test. It may then be pumped out or as is often done only a portion of the oil is withdrawn and the feed started again. This method presents a very good field for heat exchange which greatly improves the over-all efficiency of the battery.

Let us see how the continuous battery meets these objections. First, there was the question of fuel efficiency. With a continuous battery we have a constant feed of crude oil entering the first still into which we can absorb the waste heat. Three sources of waste heat are available, the hot bottoms, the vapors and the hot flue gases. It will depend upon what products are being made, what source we turn to. If the stills are running to fuel oil or bottoms that can be taken continuously from the last still in sufficient quantities a large amount of heat may be picked up here with very simple apparatus. When running to cylinder stock or asphalt the last two or three stills are batched down to test in rotation so they have to be pumped out quickly and the opportunity of salvaging their contained heat is lost. Then we turn to vapor heat exchange. We can install exchangers on the vapor lines and pump our crude through them in series. The writer has in mind one battery that is feeding the first still crude oil at 350 degrees already topped of 25 per cent of the light ends all on the heat from the vapors. When it comes to the extraction of heat from the flue gases economizers to heat boiler feed water or waste heat superheaters for the steam are preferable to trying to salvage the heat with the crude oil feed. The apparatus is standardized and the fire risk less.

When we come to the cuts to be made from a continuous battery we have certain advantages unsurpassed by any other type of installation. Each still gives a stream of constant quality and quantity. Our tower design is therefore greatly simplified. Many and varied are the types of towers. Fundamentally what is desired is contact between the evaporating liquid and vapors in a condition as nearly approaching equilibrium as possible. Two types stand out above all others, the packed tower and the bubble tower. If we could be sure of equal distribution of the descending liquid and ascending vapors over the cross section of a packed tower it would be ideal. This is nearly impossible of accomplishment and hence the bubble tower is generally recognized as the best today.

Do not be misled by the air cooled shells with various arrangement of trays,

*Annual meeting National Petroleum Association, Atlantic City, N. J., September 15, 16 and 17.

Increasing Refinery Throughput
With Heat Exchange Equipment
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The Ross Heater & Manufacturing
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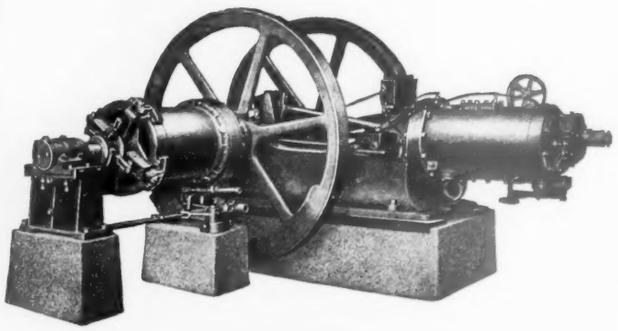

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tortuous channels, etc. They are simple dephlegmators and have a decidedly limited application.

With proper towers our continuous battery will give complete separation of all light products up to and including 300 per cent oil. In fact further final cuts could be made but when running Pennsylvania crude there is no object in making final separation between fuel oil and wax distillate since the latter will have to be redistilled anyway.

Pressure distillate and filter wash may be distilled at the same time by pumping such products directly into the towers.

Limited Application

This description may have been of interest, but it must be borne in mind that continuous stills have a limited application to a Pennsylvania refinery. In the first place six to eight stills are necessary. The smallest practical size stills would have a capacity beyond your requirements. About 2,000 bbls. per day is the economical lower limit for a continuous battery. Of course, it is possible to operate continuously part of the month and then change to batch running to finish up the stock accumulated, but this procedure does not yield the full advantages.

Two Type Pipe Stills

Let us turn to the modern pipe stills. First let us get firmly in mind that there are two distinct types of pipe stills. First, the "once through" type and, second, the circulating type.

The first consists of a coil discharging to a separator. Towers and exchangers are supplementary and do not affect the principle. The oil is pumped through and raised to a temperature sufficient to evaporate all of the cuts desired. This oil and vapor are discharged together into a vessel known as a separator. The vapors leave the separator as one big cut and are fractioned by the towers to the products desired. Pipe stills are built in any size up to 10,000 bbls. per day and for any desired percentage of overhead up to 90 per cent. Their efficiencies are excellent.

Counter flow of flue gas and oil result in high furnaces efficiencies. With a simple residual exchanger 60 to 65 per cent efficiency is easily obtained, and with complete vapor exchangers the overall efficiency of this kind of apparatus may be brought up to 80 per cent.

This once through type of heater has certain disadvantages for the Pennsylvania refiner. The test on the residuum cannot be controlled with sufficient accuracy for running oil to cylinder stock or reducing any oil to a given specification. True, a deeper cut could be made to insure reaching the desired flash or fire, but the sacrifice of yield would be serious.

Again a once-through heater must be operated at a given minimum throughout.

Prevention of coke or salt deposits in the tubes is accomplished by the maintenance of velocity in excess of the so-called critical velocity. This critical velocity is that at which the flow changes from stream line to turbulent. The flow must always be turbulent to prevent the deposits and hence the unit will have a definite minimum throughout.

The once-through heater may be used to strip the crude of all light ends and even fuel oil, leaving the wax distillate cut to be taken off in a batch still when the reduced crude is run on down to stock. This type also has an application in the Pennsylvania Field as a substitute for the first four or five stills of a continuous battery.

Circulating Type

The circulating type of pipe still consists of a tank separator with a hot oil pump and a pipe heater. There is no heat applied to the separator. The pump draws the oil from the separator and puts it through the coil right back into the separator. The tubes being direct fired there is an increment of heat at each pass and the bulk of the oil in the separator gradually rises in temperature and distillation goes on progressively. This is in reality our old batch still with simply a new method of applying the heat. Thus, any of the operations conducted in a batch still can be carried on in the circulating type of pipe still.

This elementary circulating type of pipe still cannot in itself show any great amount of efficiency. There is no feed, therefore no chance of heat exchange. The flue gases at the end of a run must be high in temperature.

Now if we take a second separator and put on vapor heat exchangers we can use this second one as an accumulator of heat while the first one is running. When the first one is down the second one will have a batch of oil at 300 to 350 degrees temperature and with 15 to 30 per cent of the overhead distillates already removed. The circulating pump and the pipe heater are then swung over to the second separator, the first one is pumped out and is then used as an accumulator while number two comes on down. Thus the separators alternate, while the circulating pump and pipe heater run continuously. In this way the small refiner can take advantage of the economies of pipe still distillation at the same time possessing a unit on which he can run to stock or reduce an oil to test. This unit can be run at any capacity within reason under the maximum for which it was designed. The circulating pump will maintain the necessary velocity and the throughput is then controlled by the intensity of firing.

Superheated Steam

I wish to touch upon the advantages of superheated steam in the stills. On a battery of the fair efficiency of 40 per cent superheating the steam will have some 10 per cent of the fuel? You now use your stills as steam superheaters. Why not use waste heat? Then you will find further about 15 per cent increase in capacity. The oil does not have to be subjected to heat so long, hence there will be better quality and yield of heavy products. The last statements are based on observations of five plants using superheated steam and while it may be theory it is theory checked in practice.

You are probably thinking that all of this talk does not apply to your plant. You have some fairly good stills and cannot afford to write them off and go into these new types of equipment. What I wish to emphasize is the fact that very often old equipment can be rearranged and added to so as to accomplish the results desired. In one case three old stills were reset, and by means of one pipe still preheater, exchangers and continuous operation 2,500 bbls. of oil per day is now being run with complete fractionation. In another case five old stills were connected for continuous running. In still a third case three old cracking stills were remodeled into a continuous light oil battery of 1,500 bbls. daily capacity. In still another case two old steamers with their condensers were changed by means of a circulating pipe heater into a unit that will run all of the crude down to cylinder stock.

Look over your plant and see what can be utilized. You may find the change to modern methods much less expensive than you think.

Crude Revision

The large refineries have adopted modern methods. They do not rerun one barrel of oil above the absolute minimum. Their stills must show a high fuel efficiency. The small refiner must get in line.

We hear a lot about the greater division with its reduction of costs. Don't let it worry you. The big refinery may have the greater efficiency, but it faces another handicap. Just as soon as a plant grows to the point where the management is out of touch with the individual worker, big divisor means little. Then co-operation between departments falls down. A host of experts attaches itself to the management and further complicates the problem. Overhead costs jump. I firmly believe that the best refinery costs (I am speaking of complete plants such as yours) can be attained in a refinery of 1,000 to 5,000 bbls. daily capacity.

I believe the crude divisor is of decided benefit from 500 to 1,000 bbls. per

(Continued on Page 129)

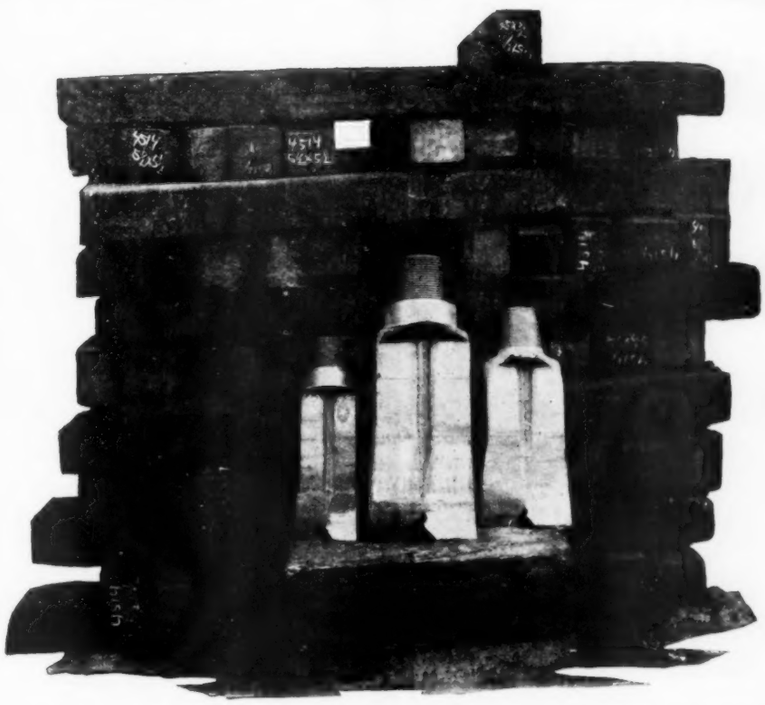

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Photo shows pile of Agathon Alloy Steel billets at plant of the Lone Star Tool Company, Wichita Falls, Texas.

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CENTRAL WEST FIELDS

(Continued from Page 61)

the south line and 200 feet from the east line of the same farm, found top of the sand at 1,346 feet and at 9 feet in the sand made a 75-bbl. initial producer. Jose S. Young, Jr., and others' No. 1, in the southwest corner of the Asa R. Gher farm, in the southeast quarter of Section 13, is a 60-bbl. initial producer, with top of the sand at 1,327 feet and went 31 feet in the sand. In the same section, B. F. Wirebaugh and others' No. 4 well, 200 feet from the south line and 750 feet from the west line of the Catherine Keyser farm, in the southwest quarter, developed a dry hole at a total depth of 1,538 feet. The Adams Corner Oil Co.'s No. 1, which was a gas well in the Bridgeport shallow sand, has been drilled to the regular producing sand on the Edward Armstrong farm, Section 7, and estimated showing for 100 bbls. or better, initial production.

In Montgomery Township, Crawford County, W. C. McBride, Inc., drilled in a 1-bbl. pumper in No. 7 in the southwest corner of the C. A. Dickinson farm, in the northwest quarter of Section 14.

In Parker Township, Clark County, Charles P. King's No. 8 well, 1,100 feet from the north line and 980 feet from the west line of the N. B. Lee farm, Section 32, was a duster at a depth of 420 feet. In Westfield Township, same county, the Ohio Oil Co.'s No. 17 well, 980 feet from the north line and 430 feet from the west line of the Hartford Drake farm, being the S half SE, Section 32, pumped 2 bbls. at 546 feet.

In Martinsville Township, Clark County, the Trenton Rock Oil & Gas Co.'s No. 5 well, 200 feet from the south line and 660 feet from the east line of the C. L. McClelland farm, in the southwest quarter of Section 30, pumped 70 bbls. from the Niagara limestone formation at a depth of 1,587 feet. Same company's No. 9 well, 200 feet from the north line and 660 feet from the east line of the E. R. Ault farm, in the same quarter section, pumped 30 bbls. from the same formation at 1,602 feet.

High Water Did Damage

As a result of the flood conditions, the Marshall Waterworks Co., on Big Creek, 4 miles east of Marshall, was destroyed by the swollen stream. Rising throughout the night, the water first halted the pumps and later washed away the foundation of the plant, tearing machinery from its bases and sending it to the bottom of the creek.

Possibly the scene of the greatest damage is near Martinsville, Clark County. The water which fell in the cloudburst above Martinsville came down with a terrific speed and went over the pavement of the National Highway west of Martinsville in a path of one-half mile wide and 3 feet deep. The wall of the water took all the guard fence from the south side of the pavement and sheared the dirt from perpendicular with the slab. The water went over the grade of the Pennsylvania lines and washed out 800 feet of track.

Beyond the highway it flooded the Illinois Pipe Line Co.'s pump station to a depth of 14 feet. The men at work in the station had a close call from being drowned in the buildings. The flood came upon them at 2:30. The men were unaware of any excessive high water at the station until the water came upon them like a wall. None of the men knew the position of any other until they were rescued Thursday morning. The firemen were caught in the boiler room and on account of the danger of escaping steam and other hazards they deemed it best to leave. One of the firemen was unable to swim and was assisted to safety by the other man, and they reached the top of another building close by. The engineer, mounted to a high point on the pump and waited until 8 o'clock Thursday morning before assistance came. The operator of the wireless equipment was compelled to break a window and swim to safety.

The flood completely ruined all the dynamos and generator motors, and wireless equipment of the Illinois Pipe Line Co., at this station. The wall of water also moved a 35,000-bbl. oil tank with over 4 feet of fluid in it over the fire grade and down the stream for 700 feet. Fortunately the tank lodged against some large trees or it would undoubtedly have taken the bridge on the highway and railroad.

Resumed Drilling

The Grayville Oil Syndicate has resumed drilling at its important wildcat well on the James M. Helm farm, 2 miles northwest of Grayville in French Creek Precinct, Section 18, Edwards County, after waiting several days on parts which were shipped from Oklahoma.

Michigan

The twenty-eighth producer for the Saginaw Field was brought in by the Sun Oil Co., in the southwest corner of the F. Stelzriede 40 acres, being the SW NE, Section 11, Saginaw Township, Saginaw County, pushing the boundaries of the field northward one-quarter of a mile from the same company's No. 1 on the Adam Muerminger farm, and about 760 feet north and one-half mile east of the Ohio Fuel Corp.'s No. 1, on the E. Fisher farm, making the farthest northern producer found so far in the field. It adds quite an interesting area. The Boldebuck farm duster, drilled by the Bliss Petroleum Co., is three-quarters of a mile due north of the Stelzriede producer and it is problematical somewhere between the two wells lies the boundary of the oil field as far as the north side is concerned. Top of the sand in the Sun Oil Co.'s new well was tapped at 1,832 feet and drilled 20 feet in the Berea to a total depth of 1,852 feet. Top of the Berea sand in the Boldebuck dry hole, to the north, was found at 1,883 feet or a dip of 51 feet in radius of three-fourth of a mile. The Sun Oil Co. well, according to the owners, shows for about 5 bbls. initial, being so far the lightest producer found in the field proper.

The twenty-ninth well for the field was drilled by Vorhees & McNally, is No. 1 on the Charles Ulrich farm, at Hermansau and Shattuck Roads. Top of the Berea sand was found at 1,822 feet and sent 20 feet in the sand and within defined territory. It is estimated at around 15 bbls. initial.

The Sun Oil Co., of Toledo, Ohio., now has five producing wells in the field and the same number drilling, with possibilities of starting the sixth string of tools at once. The Saginaw Prospecting Co. has drilled so far 13 producers in the field and no dry holes, in fact no dry holes have been drilled, the closest one of the five dusters being on the Boldebuck farm, the others being miles away from production. The next week or so should show at least three or four new completions unless fishing jobs or something unseen may happen to delay them.

New Rigs and Drilling Wells

The Bliss Petroleum Co. is drilling No. 4 on the Casper Ulrich farm, Section 14, Saginaw Township. Sun Oil Co. is drilling Nos. 3 and 4 John Schoenteit, Section 11; No. 1 William Scherzer, No. 1 Dr. E. Bradshaw, Section 10, and No. 1 C. J. Robs, Section 11.

Superior Oil Co. is drilling No. 2 Spatz farm, near Hermansau Road and Weiss Street. In the immediate area, near the northeast corner of Weiss and Hermansau, the Saval Development Co. is working at No. 1 on the Weiss property. The Wells-Schmidt Co. is starting a well on the Whittier Mill property, at Oak and Pine Streets. Saginaw Prospecting Co. is drilling No. 1 on the Rechter estate, near the Shattuck Road and south of its No. 10 well; and starting a well on the L. W. Bixby property on Benjamine Street, near Weiss Street. Fordney Petroleum Co. is drilling a well on the John Bisner property, north of Charles Street and near Weiss Street. Matthews, Heppler and others are working at No. 1 on the Mrs. Caroline Heppler property, on the Shattuck Road, west of Hermansau Road. Crane, Wallace and others are starting a well on the Lodge-Strong

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property, on the west side of Hermansau Road, north of the railroad.

The Fordney Petroleum Co. is starting a well about 1,000 feet northeast of the Ohio Oil Co.'s No. 1, on the Mershon-Eddy-Parker property, and near Jackson Street. Should this venture prove productive it will be a northeast extension to the pool. Saval Development Co. is starting a well on the George and Emil Spatz property, along Hermansau Road, near Oak Street. John H. Shaltry and others are working at a well on the Reinhart property. S. M. Bacon and others are working at No. 1 Buckean property, on Maple Street. Myron E. Lee will start a second well on the J. Conrad Brechtelsbauer lease, along the Shattuck Road, east of the Hermansau Road.

Bay County, to the north of Saginaw, is to have its second test which will be drilled by C. A. Smith, Jr., of Chester, W. Va., on the Peter Forster farm, in Section 26, Monitor Township, about 3½ miles west of Bay City, near the Midland Road. The drilling will be done by Contractor George Talbot.

Transfers Its Assets

Dissolution of the Sanilac and St. Clair Prospecting Co., which has been conducting oil prospecting operations in the vicinity of Port Huron and transference of its assets to a new corporation, the Michigan Petroleum Co., has been announced. The interests involved in the deal are understood to be about the same as those in the Brown City Prospecting Co., which is drilling a deep test 6 miles east of the Dixie, on the King Road, in Frankenmuth Township, Saginaw County. In this test no oil was found in the Berea sand, which was topped at 1,792 feet and the sand was passed through at 1,827 feet, and expects to test out the next sand which is the Saginaw sand.

Much Leasing Going On

William C. Mertz leased 13 lots in the town of Carrollton, and 10 acres in Carrollton Township, Saginaw County. Clarence W. Beeker, trustee, leased 2 lots in the city of Saginaw.

A. H. Graves, trustee, filed 26 leases comprising 1,452 acres, in St. Charles Township and 192 acres in Albee Township, Saginaw County.

John K. Swanson, trustee, filed four oil leases of 240 acres taken in Spaulding Township, Saginaw County.

George Ewing, trustee, filed a lease on 50 acres in Saginaw Township, belonging to Moise and Alma Laundra. Fordney Petroleum Co. filed lease on 4 lots in the city of Saginaw. A lease on 2 lots in Carrollton village was filed by the Saval Development Co. Eight leases on Carrollton village property were filed by Norman C. Burke, trustee.

KENTUCKY-TENNESSEE

(Continued from Page 61)

were distributed by counties and districts as follows:

	Runs	Increase	Decrease
Warren	33,278.38	....	3,305.36
Barren	18,567.93	....	1,892.33
Allen	27,045.45	575.49	....
Cumberland, Monroe	3,363.95	....	445.62
Owensboro Dist.:			
Ohio County	37,960.69	2,632.62	....
Hancock Co.	2,245.37	....	699.25
Daviess Co.	1,497.81	308.55	....
Clinton	1,649.43	947.83	....
Hopkins	1,247.66	....	22.34
Simpson	660.76	....	196.99
Logan	....	....	71.65
August runs	127,457.43	4,464.49	6,543.54
July runs	129,536.48		
Difference	2,079.05		

Eastern Division

Considerable interest is centered in the wildcat ventures to be made by the Petroleum Exploration Co., on a 3,000-acre block of leases on the North Jellico Coal Co.'s land in the Indian Creek district of Knox County. The derrick for the first of six tests is being constructed and drilling is expected to start within a very short time. On Stinking Creek, same County, the Foreman Lumber Co.'s well on its own acreage is shut down around 1,900 feet, making repairs. The well of Dizney & McKee, on the land at Bailey's Switch, same county, is shut down for repairs, but soon will be able to resume operations.

In District 21, in advance of the Ivyton Field, of Floyd-Knott Counties, the Ivyton Oil & Gas Co.'s test, on the Jake Allen farm, on Salt Lick of Licking River, caused quite a surprise when brought in for a 25-bbl. initial producer and widens the field for quite a distance, with prospects of connecting up with the Ivyton Field proper, bringing production together along the line of Magoffin and Floyd Counties, near where the Hupp, Duff and Chiles wells are on the B. F. Whitt farm, which are on the Magoffin side of the county line between that county and Floyd.

The other completion is in the North Weir Field of Lawrence-Johnson Counties, in District 33, being the Swiss Oil Corp.'s No. 22, on the J. M. Fyffe farm, estimated as a 5-bbl. pumper from the Weir sand. This company's No. 44, on the J. J. Gambill farm, in District 32, is in the sand as is its No. 23 on the C. K. Dobyne No. 1 farm, District 22, but are not as yet reported completions. Both will make average pumpers.

The extension of the Paragon Development Co.'s line across the Kentucky border into Clay County, Tennessee, is expected to be completed and ready to ship crude by the first of October. The wet weather has hampered more active work on the line as the moving of pipe has been impossible. This line will give the shallow gusher territory of this county its first outlet of crude, that is from the Celina area, as the Stoll Oil & Refining Co. has a line from the Tinsley's Bottom Field, a distance of approximately 14 miles, that takes care of the production from that part of Clay County.

Western Division

The Glasgow Field, of Barren County, as usual, leads in the number of new completions and maintains the greatest activity in the western division, closely followed by the Owensboro Field, which covers three counties, while the Glasgow Field has but one county to draw its development from. One of the best wells of the week was found in the Hall Baker Pool, of Barren County, when the Consolidated Gas Co. drilled in its No. 41 on the H. W. Duff farm, for 25 bbls. initial and has No. 42, same farm, close to the pay sand. In the Emery-Moore Pool, Seams and others' No. 4, on the W. E. Steffey 85 acres, is estimated at 5 bbls.

In the Lecta Pool, 3 miles southeast of Glasgow, the Esslinger Oil Co.'s second well, on the Bartlett farm, is estimated at 10 bbls., while four other wells in the pool are due for completion. In the Knob Road district, the R. B. Tyler Co.'s No. 11, on the White farm, is reported at 10 bbls., while Ziegler Brothers' No. 7, on the C. D. Boyd farm, is reported a duster. Star Oil & Gas Co. is due in with No. 13 on the Richardson farm. In the Gorby Pool, T. L. Gorby and others' No. 4, on the Lessenberry farm, is a 5-bbl. pumper, while on the Rock Hill Road, Smith and Snyder are reported to have a 3-bbl. well at No. 3 on the T. J. Smith farm. In the same area, Sanson, Warner and others are still at work trying to exhaust salt water through a 3-inch tubing at their test on the Petty farm, at a depth of 296 feet.

Owensboro Field

The Owensboro Field, comprising Ohio, Hancock and Daviess Counties, is coming forward with development work which is spreading pretty well over all three counties. This field is reported to now be running approximately 1,400 bbls. of crude oil daily through the pipeline of the Indian Pipe Line Corp., which goes to the Indian Refining Co.'s refinery at Lawrenceville, Ill. This is the maximum production of the field, with little indication of a very heavy increase before next spring or summer. There will be some drilling done during the winter, but it will be rather desultory, as approaches to the fields become all but impassable for supply trucks, the operators having great difficulty getting over the roads with the lighter passenger automobiles. The development, as it is at this time, while in no great volume, may continue for an indefinite time, unless the weather and road conditions get

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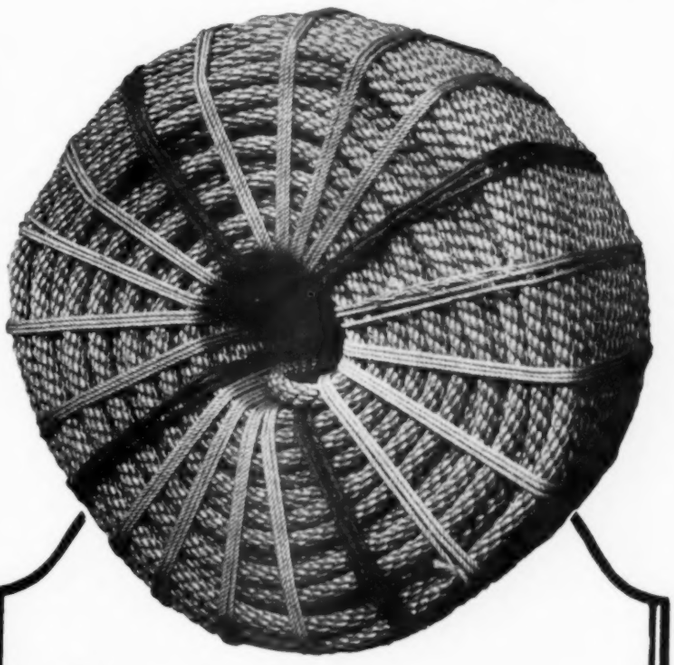

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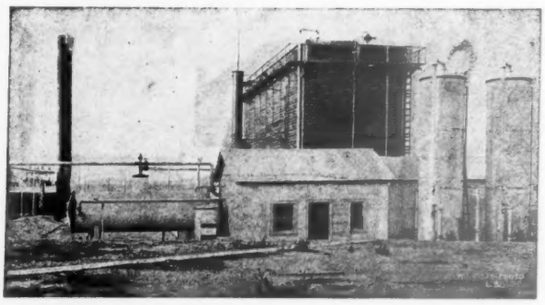

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too severe, for there are a number of large concerns that have recently entered the field to develop holdings and they will maintain work just as long as they are able. In the Owensboro Field, like all other fields of Kentucky, every well drilled is considered a test or what some call wildcats, but it has been demonstrated that a big well does not mean that others will be found a location away, therefore every well drilled in the State whether close to producing wells or far away, proves only an equal chance for a producer. To a large extent, the production in Kentucky, with the exception of a few areas, is confined to small pools and not continuous as is the case in the Trenton rock formation of Ohio, or the sands of West Virginia, Pennsylvania, Illinois and Indiana.

Six completions are reported from the Owensboro area during the past week, three being producers and the same number of failures.

The Penn-Indiana Oil Syndicate drilled in No. 7 on the R. B. Powers 100 acres, in the Swope-Powers Pool and located 400 feet east of No. 4, same farm, for a 10-bbl. well in the Jett sand. Same company drilled a dry hole at No. 4 on the C. A. Kelley 260 acres, 400 feet south of No. 3, which was credited when completed at 10 bbls. initial.

The Chicago Petroleum Syndicate's second well on the Nannie J. Brown 30 acres, is a dry hole, while its No. 9, on the Guenther-Gant farm, in the Swope Pool, is reported at 10 bbls. from the Barlow sand. No. 2 well of Thompson and Tremor, in the southeast corner of the M. Coleman farm, came in a failure. Clarence A. Leeper's No. 2, on the W. A. Probus 37 acres, and 600 feet west of No. 1, same farm, is rated good for 5 bbls.

The Ohio Oil Co., which has been delayed with a fishing job at its second well on the Ellis & Heflin 204 acres, also had a fishing job at 750 feet at its test on the Daly farm, a half mile northeast of Pleasant Ridge. Same company is drilling No. 1 on the Lonzo Crowe 50 acres, which is an offset to its No. 1 on the Ellis & Heflin farm. The Rex-Pyramid Oil Co. is starting a second well on the J. Ambrose farm, while the Butte Dredging Co. is working at No. 4 on the Alice Evans 104 acres. J. W. Loman, trustee, is drilling No. 6 on the Joe Bob Ellis 50 acres. The Newton Oil Co. made a deal whereby C. E. Daugherty and others will drill at least two wells on the Lafe Payne 167 acres, west of Haynesville, adjoining the Laura Mercer 100 acres. The Vicion Oil Co. is drilling No. 12 on the O. T. Burdett farm, same area. C. A. Leeper is drilling No. 1 along the center of the east line of the John Raymond farm, on the south side of the creek. White Plains Oil & Gas Co. is starting No. 4 well on the John C. Ward 50 acres and delayed by a fishing job at No. 1 on the Ira Howard 216 acres. Ellis & Courson have a fishing job at No. 1 A. Martin farm.

Other Developments

Quietude prevails in Warren, Allen, Cumberland and Simpson Counties, with poor prospects of a revival at this time. In the Scottsville Field of Allen County, Mrs. John McAlpin completed her No. 10 on the Warren McReynolds farm, with a production of but 1 bbl. from a depth of 378 feet. A. Davis struck a dore of salt water in No. 5 on the W. M. Dodson farm at 280 feet.

In the Bowling Green Field of Warren County, H. V. Taylor, attorney, brought in a 2-bbl. pumper at No. 18 on the R. C. Smith farm, at a depth of 460 feet. George McGinley's No. 22, on the J. W. Pugh farm, proved to be a dry hole at 565 feet. P. H. Lavelle is drilling No. 9 W. R. Hunton farm, and Dr. W. B. Cauble is drilling No. 11 J. Vance farm.

In the Franklin Field of Simpson County, K. Blands' No. 7 on his own farm, drilled in a duster at 575 feet.

In Cumberland County, West and others' test on the H. E. Thurman farm, struck the top of the Pencil Cave at 683 feet and completed a dry hole at 750 feet. Same parties are starting a well on the D. Garmon farm. In the Sulphur Creek Pool, the Southern Producers & Refiners Co. is nearing the pay sand at No. 11 on the A. A. Huddleston farm. Hook and McComas found the Pencil Cave at 562 feet in No. 2 on the J. B. Riddle farm, and at last account were nearing the pay sand at a depth of 985 feet. In the Pulsey Creek Field, W. S. Raydure & Son struck the Pencil Cave at 543 feet in No. 1 on the T. B. Hogan farm, and report shows the well almost ready to drill in and down 685 feet. In the Crocus Creek Field, Wood, Hazlett & McLennon are drilling a second well on the George Brockman farm, while Crawford and others are reported down 300 feet at No. 2 S. Elliott farm.

In Clinton County, the Clinton Oil Co. is drilling a second well on the Edward Upchurch farm, while McClintock, Reid & Heckathorn struck top of the Pencil Cave at 620 feet at No. 2 Pierce Brothers farm, and have reached a depth of 760 feet. Ewing and others are down close to 500 feet with No. 1 on the Shipley heirs' farm.

BUSINESS VIEW OF PETROLEUM RESEARCH

(Continued from Page 73)

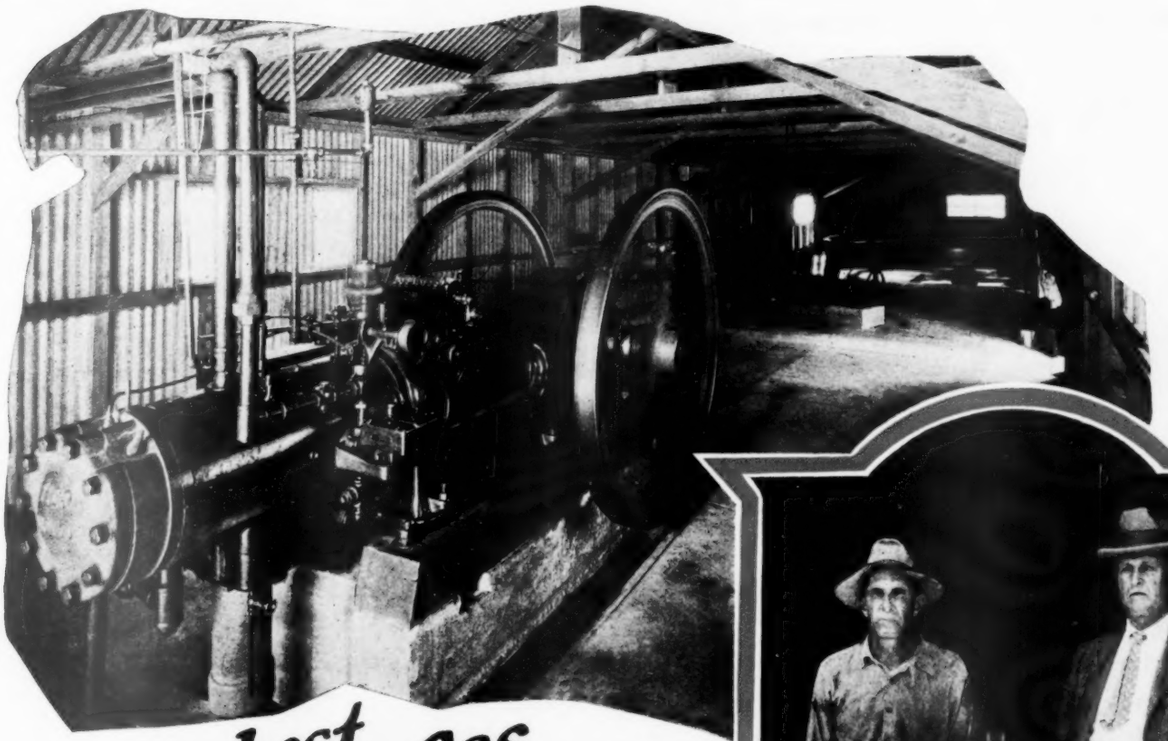
sults of work of this character were subtracted from our knowledge of today, the public would pay more for petroleum products, have less of them, get poorer products, and we should all be less prosperous than we are.

This is one extreme of the picture of research and development in the industry. The other extreme is made up by the large organizations of a few great companies, which maintain separate large, well-equipped and well staffed research laboratories; in addition, perhaps, support separate research projects at university laboratories, and maintain experimental and engineering organizations solely for prosecuting development work. An example of this type of work was the development of the tube-and-tank cracking process by the Standard Oil Co. of New Jersey.

Patent System

No picture of industrial research and development can be complete without some reference to patents. The purpose of the patents system is to promote industrial progress. If our perspective is really broad, we can see that it does this. If we have time for only a brief glance at a limited part of the picture, it sometimes looks very much as though the purpose of the patent system were to harass industry. My impression of the present status and effect of patents in the petroleum industry is this: On the whole, the patent system has been properly and wisely used by the oil industry itself. Progress has been promoted; the important patented advances have been made available to all on license terms which have caused little complaint; there has been very little litigation and very little attempt to drag innocent third parties into disputes. The industry is suffering, however, to some extent and progress is perhaps retarded, rather than advanced, in many cases, by patent disputes arising either between competing patentees outside of the operating industry or between one of these and some operating unit. Much of this is small and unimportant in individual cases, but in the aggregate is a nuisance.

There is, so far as I know, at the present time no major patent suit going on strictly between units of the oil industry. There are some important patent controversies being waged in the cracking art and in the natural gasoline art, but in these cases the moving influence is that of an interested group outside of the oil industry itself. Experience in the oil industry has not been different from that of other industries in that regard. Where an outside interest, speculating in patents for the sake of royalty revenue, rather than for the sake of profit resulting from the use of the invention, is involved, there is apt to ensue a bitter and long drawn out fight. The view of those who have had the most experience with this phase of development work is, I think, that patents for the



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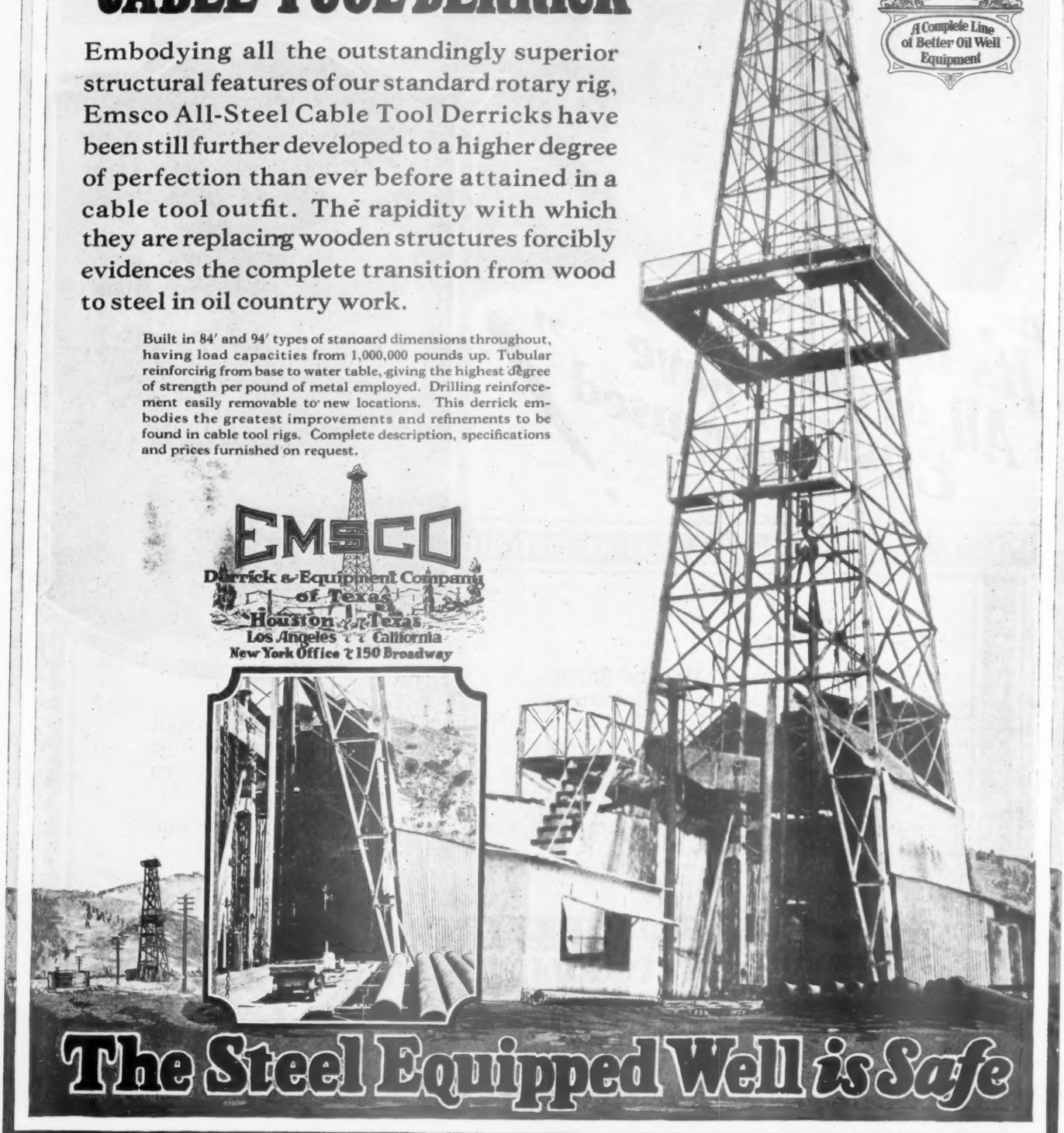

The Steel Equipped Well is Safe

sake of patents is a mistaken policy; that speculating in patents as a business in and of itself is unsound economics; and that the proper sphere of patents is that of an incident of operations. For an industrial organization, I think any other view is unsound business as well as unsound economics.

Industry and Science

At the beginning of my remarks I indicated that the viewpoint of science toward research is different from that of industry. The difference is this: Science seeks knowledge for its own sake. Pure scientific research is the prosecution of an investigation solely for the purpose of adding to the sum of human knowledge and quite without regard to whether the result has any other value in itself. Pure scientific research can therefore be broadly defined as a search for knowledge, without any further qualifications. The relation between pure scientific research and industrial research and development work is simply the relation of the general to the specific. The difference seems of importance, but the perspective given by a review extending over any long period of time shows that the limitations of industrial research and of industry itself are very closely defined by the limits of pure scientific research.

Only so fast as the foundation of general scientific knowledge has been enlarged has it been possible to erect a sound superstructure of industry. Where industrial development proceeds without an adequate foundation of basic knowledge, the structure built up is unnecessarily costly and wasteful of natural resources. I think that American industry as a whole is apt to be tainted with this fault, the petroleum industry not more than others.

The opposite situation exists in certain chemical industries, such as the coal tar industry and its dependent branches. A sustained program of scientific research, a great deal of it in the field of pure science, laid the foundation for and was directly the father of a by-product industry which grew to large proportions in an orderly fashion with little preventable economic loss.

New Interest in Research

It is by no means fair to follow such a comparison too far. Nevertheless, the contrast is striking enough to give food for thought. Within the last five years, there has been a serious effort to analyze this situation in so far as it applied to the petroleum industry. The conclusion reached from this analysis was that it was required for the future well being of our industry that strong encouragement be given to pure scientific research. It seems peculairly appropriate that Mr. Rockefeller, Sr., should have again assumed the burden of leadership by establishing the first fund for the promotion of pure research in fields bearing upon petroleum, not as a measure of philanthropy but in accordance with a carefully considered plan, the result of which has been to vitalize the movement and make it a program of the industry as a whole.

I think it is permissable to conclude from the tenor of the report of the President's Oil Conservation Board, just issued, that the record of research and development work and its results in the petroleum industry during the last 15 years is perhaps the most decisive single factor which justifies the nation in facing the future of oil with assurance. In spite of the fact that there is only a small supply of crude known to be available for our requirements, a supply totally inadequate to meet even a conservative view of the future demand, there is no lack of confidence in the outcome. The responsibility which this places upon the thousand technical men, more or less, who are now carrying the research and development program within the industry is heavy.

Ebb and Flow of Values

There must be an expectation of, and any forecast of the future must give reasonable latitude for, an ebb and flow of values of petroleum and its products, both relatively to other commodities and, within ths industry, of one product relatively to another. It is this ebb and flow which takes care, on the one hand, of the problem of stimulating the search for additional natural resources and, on the other hand, stimulates the imagination of the inventor, the research worker and the development engineer in all directions—in the direction of higher percentage recovery from existing oil fields, even at a higher cost; cheaper production from new fields; more efficient utilization and consequent diminished unit consumption, of one product; creation of entirely new markets for the same product or for another; and synthesis or conversion of one product into another, in either direction, within the maximum limits. Some of these things are prima facie self-contradictory aspirations. Nevertheless, it is only under the stimulus of such a constantly changing situation as this that the utmost is accomplished in the way of extension of knowledge by research and development work in all directions, and only by extension of knowledge in all directions is it possible to obtain maximum efficiency in any one direction. To make this clearer, it now appears desirable to bend every effort toward increasing the production of gasoline relatively to crude oil. This can be done and will be done. It is within the bounds of possibility that the conversion from any form of heavier petroleum oil to gasoline may proceed practically quantatively, that is, 100 gallons of gasoline from 100 gallons of petroleum oil of any description; but it is likewise within the bounds of possibility that per capita gasoline consumption 10 years hence may be one-third of present consumption, with the same use of motor transportation. There is, in theory and according to the promise of advanced research results even now available, ample margin to do either or both of these things.

Pure research in fields bearing even remotely on the petroleum industry and the utilization of its products should be and will be prosecuted more and more extensively. Industrial research and development work will provide its own quota of new knowledge and will build upon this and upon the contributions of pure science and of other arts, first in one direction, perhaps, and then in the opposite direction, as the necessarily short-range view of business permits, but with the result of providing as the years pass an ever widening horizon of basic knowledge transmitted through technical skill into serviceable industrial operations and commercial products.

KENTUCKY-TENNESSEE

(Continued from Page 63)

hauling rig timbers to a location on the Charles Clark farm. In Freemans Creek district, the Pittsburgh & West Virginia Gas Co. is drilling on the E. D. Bannon farm. W. M. Frey and others have a rig up on the M. E. Parsonage lot. In Simpson district, Harrison County, the Hope Natural Gas Co. is due in the sand on the Belle Payne farm. In Grant district, the same company has a gasser in the Speechley sand on the Silas McQuarter farm. In Union district, the Hope Construction & Refining Co. is due in the sand on the G. W. Morrison farm.

In Clay district, Monongalia County, the Philadelphia Gas Co. is due in the Big Injun sand on the G. T. Moore farm. In Battelle district, the Pittsburgh & West Virginia Gas Co. is drilling a second test on the Dr. E. Bell farm to the Bayard sand. In Clay district, the Carnegie Natural Gas Co. is drilling on the D. R. Wright 38 acres. In Church district, Wetzel County, Bell Brothers have started to drill on the J. C. Hixenbaugh farm.

Still Fishing at Deep Test

The Reserve Gas Co. is still fishing for casing at its deep test on the Smith Brothers' farm in Union district, Harrison County. This well was started two years ago and had reached a depth of 6,820 feet when the casing parted and they have been fishing since November last. The Reserve Gas Co. has expended more than $100,000 on this well and the end is not in sight.

In Clay district, Wetzel County, the

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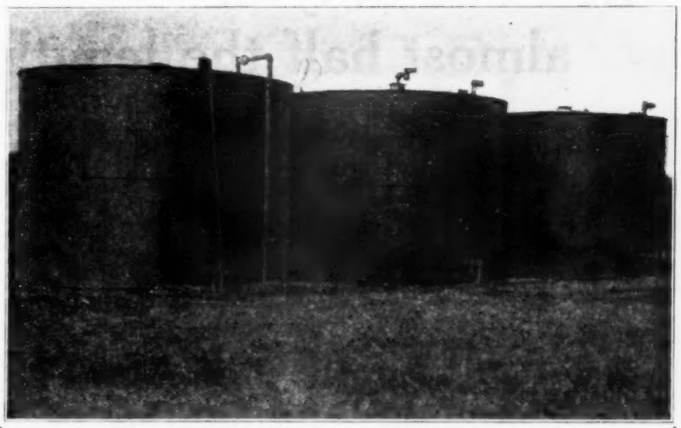

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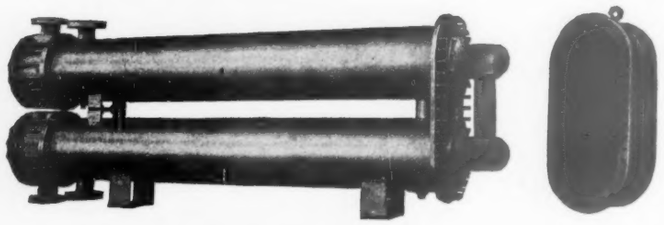

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Carnegie Natural Gas Co. is drilling on the Margaret Abrigg farm. In Center district, the Hope Natural Gas Co. is due in the sand on the Elmus Miller farm. In Union district, Marshall County, W. F. Burgess & Co. are due in the Big Injun sand on the Michael Marison farm. In Grant district, Ritchie County, Swingle & Co. are due in the Big Injun sand on the Robert Templeton farm. In Murphy district, Bickerstaff and others are due in the same formation on the Fairview M. E. Church lot.

In Lafayette district, Pleasants County, the Frost Oil Co. has rig material at a location on the S. B. Wrick farm. In Union district, Wood County, the Four S. Oil Co. has started to drill on the Thomas Moore farm. In the same district, the Peevey Oil Co. is building a rig on the Hebrick-Rapp farm. In Grant district, Cabell County, the Monickel Gas Co. has part of the rig material at a location on the John Findley farm.

Southeast Ohio

In Section 10, Hopewell Township, Licking County, Ohio, the Pure Oil Co. completed and shot in the Clinton sand No. 3 on the A. O. Michael farm. The well produced 110 bbls. the first 24 hours. In the same township the Planet Oil Co. got a 20-bbl. producer when it drilled No. 3 on the P. L. Cramer farm through the Clinton sand.

Fair Producer in Hocking County

In the northeast quarter of Section 14, Washington Township, Hocking County, the Gordon Oil Co. completed and shot in the Clinton sand No. 3 on the James Noble farm. It produced 55 bbls. the first 24 hours.

Duster in Meigs County

In the northwest quarter of Sutton Township, Meigs County, the Meigs & Summers Oil & Gas Co. has drilled a test on the Milo Van Meyer farm through the Berea grit and dry. In Newport Township, Washington County, G. W. Kesselring has completed No. 20 on the A. B. Little farm, good for 10 bbls. a day in the Mitchell sand.

Belmont County

In the southeast quarter of Section 12, Washington Township, Belmont County, the Natural Gas Co. of West Virginia has completed in the Berea grit No. 4 on the E. Ferguson & Co. farm. It is a duster. In the southeast quarter of the same township, the same company has completed No. 3 on the J. F. Bumgardner farm, good for 10 bbls. a day in the same formation. In the southwest quarter of Section 5, Wayne Township, D. U. Powell and others have a Keener sand pumper good for 4 bbls. a day at a test on the A. C. Shepherd farm. In Franklin Township, Licking County, Bishop, Hazlett & Co. are drilling No. 5 on the Martha Gutridge farm.

In the southwest quarter of Section 21, Jackson Township, Knox County, the Arkansas Fuel Oil Co. completed and shot No. 5 on the James R. Hardesty farm. It produced 10 bbls. the first 24 hours. It is a Berea grit producer. Sherman and others have completed a test in the same formation a test on the C. S. Moore farm in the Fisher Pool, Lot 73, Athens Township, Athens County. It is a duster.

In rounding out the week of development work, southeastern Ohio fields completed nothing better than light pumpers, some in deep and others in shallow sand territory. In Section 2, Franklin Township, Licking County, Moore & Adams completed in the Berea grit No. 4 on the P. L. and Mary E. Wolfe farm. It is a very light pumper. In Lot 24, Newton Township, the Ohio Fuel Supply Co. had no better luck at No. 8 on the Ellen E. Forry farm. In Lot 24, the Ohio Fuel Supply Co.'s No. 9 on the same farm is so very light it is undecided whether to give it a test. It will probably be abandoned.

Hocking County

In the northwest quarter of Section 24, Starr Township, Hocking County, the Preston Oil Co. has completed and shot in the Clinton sand a second test on the George F. Wyskiver farm. It is showing for 12 to 15 bbls. a day and has a good gas pressure. In the northeast quarter of Section 26, Cline, Vensel and others have the same kind of a showing at a second test on the W. R. Thrush farm.

Athens County

In the Fisher Pool, Section 22, Alexander Township, Athens County, Cook and others have a duster in the Berea grit at a test on the Lester Cordray farm. In the same pool, in Alexander Township, the same parties have completed in the same formation a test on the E. R. Walker farm. It is good for less than 1 bbl. a day.

In Lot 14, Hanover Township, Licking County, the Hope Construction & Refining Co. is drilling No. 14 on the Jacob Vandenbark farm. In Lot 15, Franklin Township, A. J. Weidman & Co. are drilling No. 5 on the R. L. Tavener farm.

In Lot 34, Newton Township, Licking County, F. M. Rugg & Co. drilled through and shot in the Berea grit No. 10 on the Clinton S. McKinney farm. It produced 30 bbls. the ensuing 24 hours. In Lot 8, same township, the Ohio Fuel Supply Co.'s No. 5 on the O. Hansberger farm is a natural producer in the Berea grit good for 20 bbls. a day.

Dusters in Hocking County

In the deep sand territory in Falls Township, Hocking County, in the northwest quarter of Section 3, the Kachelmacher estate has completed a test on the George Hutson farm. It is a duster at a total depth of 2,711 feet. In the southwest quarter of Section 26, same township, the Calico Ridge Oil & Gas Co.'s test on the Edward Funk farm is through the Clinton sand and the show of oil and gas so light as to scarcely make a producer. They are undecided as to making a test.

In the southwest quarter of Section 35, York Township, Morgan County, the Sun Oil Co.'s second test on the Wilson Kirkwood farm has been completed and shot in the Berea grit. It is good for 5 bbls. a day. In Section 24, Jackson Township, Perry County, the Pure Oil Co. has started to drill a test on the Robert and F. C. Adcock farm, one-half mile southwest of the Lincoln Oil & Gas Co.'s test on the Charles Elder farm.

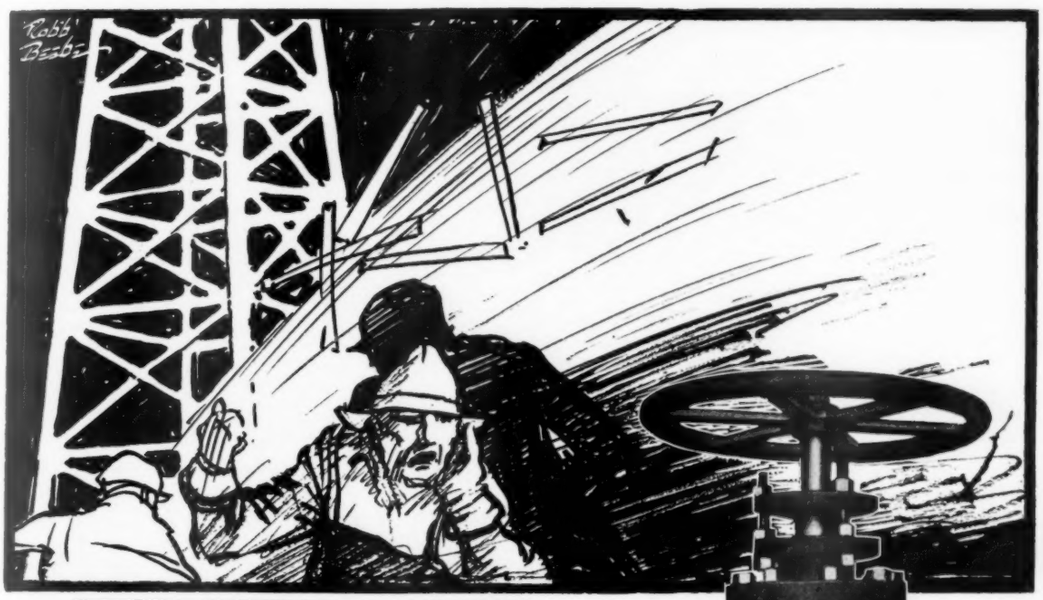
New Work Starting

In Section 18, Pike Township, Perry County, Ralph Brothers have the rig completed for a second test on the Florence Cookson farm. In Section 5, Starr Township, Hocking County, the Ohio Fuel Supply Co. is due in the Clinton sand at a test on the Lulu Poston farm. In the same section and township, the Chartiers Oil Co.'s No. 3 on the Robert F. Wolf farm is so light as scarcely to make a profitable producer. In Section 24, Falls Gore Township, the Griffin Producing Co. has the rig up for a test on the Robert Tucker farm. The Consolidated Oil & Gas Co. is drilling a test on the Charles Barthlow farm. In Greene Township, the Jewell Oil & Gas Co. is drilling on the N. L. Robey farm.

In the shallow sand territory there is a little test work under way and starting. In Section 26, Marion Township, Morgan County, the Bowman Oil & Gas Co. is drilling a test on the Asa McGrew farm. In Section 8, Penn Township, the Seville Oil & Gas Co. is due in the sand on the Charles Mendenhall farm. In Section 26, Wesley Township, Emeline Thornly and others have a very light pumper in the Cow Run sand at No. 7 on the Herbert Wymer farm. In Section 21, Pork Township, the Pure Oil Co. is drilling a test on the E. H. Fye farm.

Southwest Pennsylvania

In Spring Hill Township, Greene County, Pennsylvania, the Dunn Mar Oil & Gas Co. has completed in the fourth sand No. 3 on the Rachael E. Berdine farm. It is a light gasser. Morris Township is the most active of any in Greene County. There are four rigs up and 12 wells drilling. Those of most importance as to location are on the Rutan farms where some very good producers have been completed. The next well due will be the Carnegie Natural Gas Co.'s



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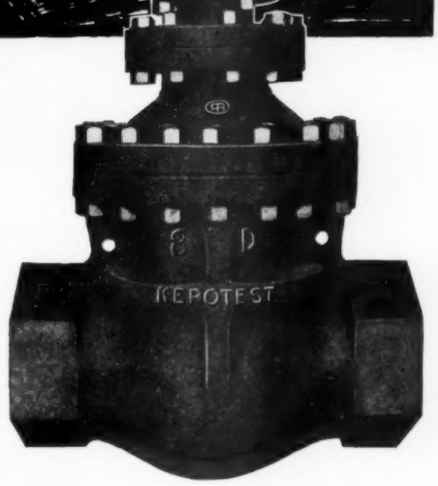

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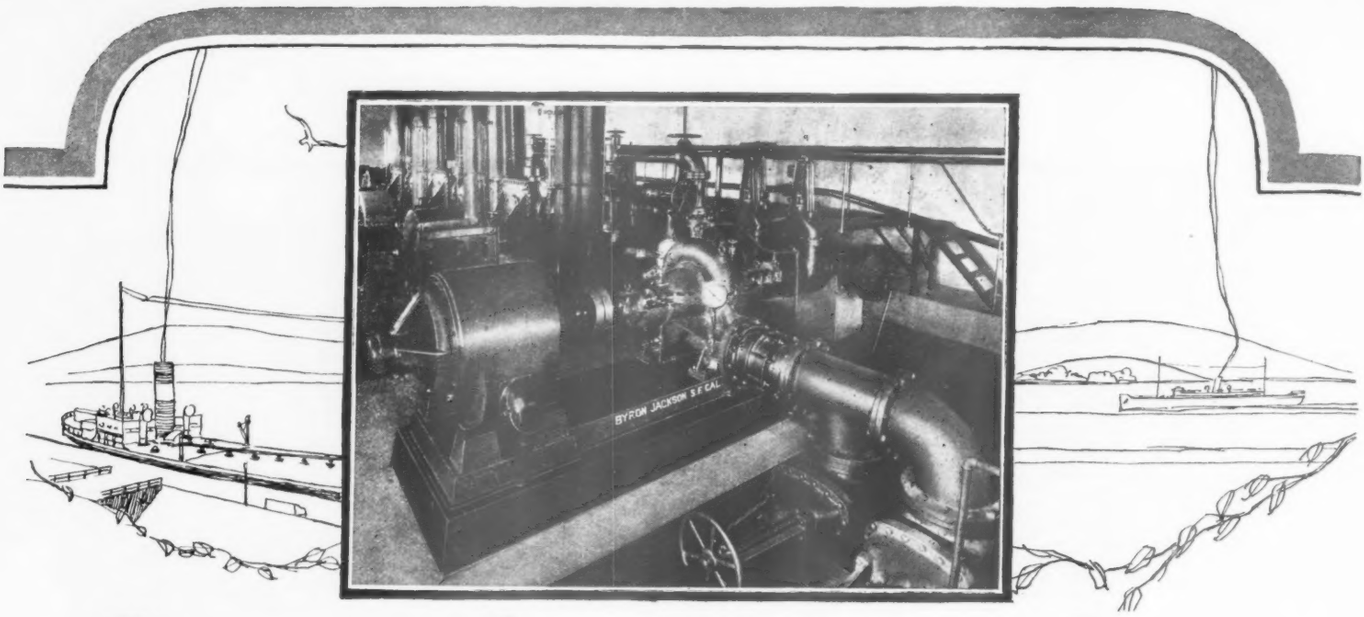

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test on the Charles Reese farm. The same company is drilling a test on the R. R. Baldwin farm. The same company is due in the sand at a test on the James Tripp farm. In Franklin Township, Elliott Moore and others are drilling a test on the Reese farm. The Manufacturers Light & Heat Co. has a rig up on the Frank Walters farm.

In Nottingham Township, Washington County, the Peoples Natural Gas Co. has a salt sand gasser at a test on the Marshall farm. In Findley Township, Allegheny County, S. S. Ferguson & Son have a light pumper on the S. S. Ferguson farm. In Marshall Township, Pinkerton & Newhart have a 4-bbl. pumper at a test on the William Dean farm.

VENEZUELA FIELDS

(Continued from Page 63)

initial production of 2,600 bbls. No. 51 was completed at 2,145 feet, with the initial production estimated at 1,000 bbls. No. 78 was completed, the production of which is 2,400 bbls. No. 90 is at a depth of 700 feet. This is considered one of the most important ever drilled in the Mene Grande Field on account of its location.

The British Controlled Oilfields is making good progress in general. It has spudded in several new wells, which should add new production to the field within the next few months. Its La Ceiba No. 1 is being drilled at a depth of 2,525 feet, while Mauroa No. 1 is now at 960 feet. The production of this company is holding around 7,000 bbls. daily.

According to reliable information, it is not impossible for the El Mene Field to extend to the south—past the old line of dry holes which halted drilling further south. It is quite possible that these dry holes have been drilled in a tight formation dyke. At least No. 12, with its initial production of 500 bbls. daily, makes things look better.

New Tanker

The Venezuela Gulf Oil Co. has received another new lake tanker, "Toas," with a capacity of 13,000 bbls., over the bars at San Carlos into Lake Maracaibo. This boat made its first trip from Cabimas (La Rosa), to Paraguana. The "Toas" increases the Gulf's transportation to a capacity of 600,000 bbls. monthly. It now has the following: "Paraguana," "Cabimas," "Napara" and "Toas." These lake tankers carry approximately 13,000 bbls. a trip and make 10 trips per month, when operating 100 per cent efficiency. In addition they have two tugs with barges, which make four or five trips per month, carrying an average of 9,000 bbls. each trip. With this fleet on hand, the Gulf has little to worry about, so far as the moving of oil is concerned.

Good Well at La Concepcion

The V. O. C. brought in its No. 32 well at La Concepcion, with an estimated production of 1,000 bbls. daily. This is believed to be its best well in this field to date. It had 30 feet of oil sand with a very high gas pressure. However, there was considerable trouble in running the liner; and the crew is still working on it, taking the chances of spoiling the producer.

New England Oil Refining Corp.'s Rio Pauji well No. 4 is closed down at 1,600 feet, but has bright prospects of resuming the work. Most of the crew are sick with fever; and again, they have a limited amount of fuel. While running this outfit made very good time.

The Neogil well No. 1, being drilled by the Richmond Petroleum Co., is at a depth of 5,070 feet. It spudded in on Neopig No. 1, which is now at a depth of 300 feet.

Lago Petroleum Corp.'s well No. 88 was completed at a depth of 2,750 feet, with an initial production of 2,000 bbls.

Orinoco Oil Co.'s well No. 1 is closed down on account of no water. However, the start was a fast one—in a few days' time they made 315 feet.

The Standard of California is making good time in El Mamon No. 1 at Uranaco. At present it is drilling at a depth of 3,500 feet. Unless oil is encountered before it will go to 5,000 feet, and is prepared to drill to 6,000 feet. The equipment consists of a three-speed rotary, with twin cylinder engines.

Anglo Venezuelan Oil Trust, Ltd.'s test well being drilled by the Standard Oil Co. of Venezuela is proving interesting. The well is now good for at least 25 bbls. a day. A second test has been started.

There has been a new drilling agreement made between the Lago and Gulf companies, in regard to the drilling of Lagunillas. The past has proven, in the La Rosa Field, that it will pay to cooperate in the future fields.

Drilling Operations

Caribbean Petroleum Co.'s No. 50 Mene Grande, depth 1,802 feet, 10-inch casing at 1,800 feet; No. 51, depth 2,200 feet, 4½-inch casing at 2,165 feet; No. 80, depth 2,385 feet, 6¼-inch casing at 2,364 feet; No. 82, depth 1,560 feet, 10-inch casing at 1,556 feet; No. 83, depth 2,288 feet, 8¼-inch casing at 1,428 feet; No. 84, no change; No. 86, depth 2,223 feet, 8¼-inch casing at 2,223 feet, in production; No. 87, depth 33 feet, 20-inch open hole, drilling with rotary; No. 88, depth 1,664 feet, 12½-inch casing at 1,661 feet, cemented; No. 89, no change.

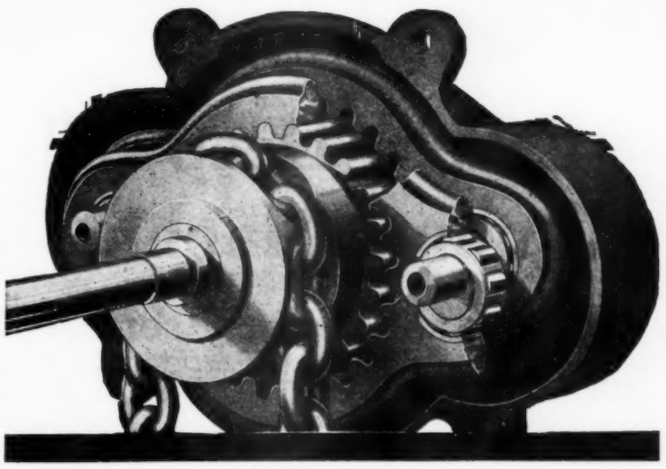
Colon Development Co.'s No. 10 Tarra, cleaning out; No. 12, depth 1,680 feet, 8¼-inch casing at 1,663 feet; No. 13, depth 1,174 feet, open hole. No. 3 Oro, no change; No. 4, lowering casing.

Lago Petroleum Corp.'s No. 18 La Rosa, depth 2,155 feet, milling on seal and liner; No. 44, depth 2,800 feet, rigging up to work over; No. 61, depth 957 feet; No. 88, depth 2,750 feet, producing; No. 59, location, rigging up; No. 62, location, rigging up; No. 85, rigging up. No. 3 Ambrosio, depth 1,480 feet, in production June 11; No. 101, depth 1,235 feet, 6¼-inch casing cemented; No. 2, rigging up; No. 8, rigging up; No. 10, location, derrick completed.

Venezuelan Oil Concessions, Ltd.'s No. 4 La Rosa, bailing; No. 9, swabbing; No. 17, depth 2,454 feet, 6¼-inch casing at 2,362 feet, producing; No. 54, cleaning out; No. 60, no change; No. 65, depth 2,500 feet, 4½-inch casing at 2,500 feet, producing; No. 69, depth 2,641 feet, 10-inch casing at 1,655 feet, producing; No. 70, depth 2,559 feet, 10-inch casing at 1,700 feet, producing; No. 71, depth 1,880 feet, 6¼-inch casing at 1,880 feet; No. 72, depth 2,507 feet, 6¼-inch casing at 340 feet; No. 73, depth 1,782 feet, 10-inch casing at 1,782 feet, cemented; No. 74, depth 1,573 feet, 10-inch casing at 1,573 feet, cemented; No. 75, depth 1,330 feet, 10-inch casing at 1,330 feet, cemented; No. 76, depth 715 feet, spudded in June 6; No. 77, depth 391 feet, spudded in June 17; No. 78, depth 330 feet, spudded in June 18. No. 1 Ambrosio, depth 1,897 feet, 10-inch casing at 1,897 feet, cemented. No. 24 La Concepcion, depth 2,000 feet, 6¼-inch casing at 2,000 feet, producing; No. 26, no change; No. 28, standing; No. 31, depth 2,090 feet, 6¼-inch casing, at 2,090 feet, producing; No. 32, depth 1,715 feet, 8¼-inch casing at 1,537 feet; No. 33, depth 1,585 feet, 8¼-inch casing at 1,552; No. 34, depth 950 feet, 10-inch casing at 650 feet. No. 16 La Paz, depth 1,216 feet, 8¼-inch casing at 980 feet, deepening; No. 20, depth 986 feet, 6¼-inch casing at 948 feet; No. 21, depth 765 feet, 10-inch casing at 750 feet. No. 1 Sibucara, no change No. 1 El Mene-Lagunillas, no progress; No. 2, depth 720 feet, 15½-inch casing at 371 feet.

SWEDEN TURNS TO SHALE

The Swedish papers announced that the Emissions Institute in Stockholm has obtained a concession over 35,600 acres in Estonia for the mining of shale for the production of oil. The concession is regarded as of great significance for the supply of motor oil to Sweden, especially as experiments which have been conducted on behalf of the Emissions Institute in Sweden with shale imported from Estonia seem to give promise of a produce rate of about 27 per cent.



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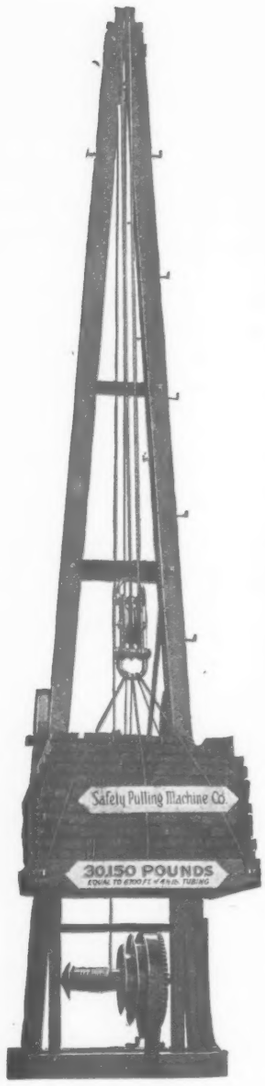

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Reel or Drum; 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as Star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.

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DELIVERIES ON OIL COUNTRY GOODS MAY TEND TO SHORTEN

By B. E. V. Luty

PITTSBURGH, Pa., Sept. 20.—Delivery promises by the pipe mills on oil country goods have not shortened, being still, say, four to six weeks. These promises have been running much the same for, say, three months past. The fact that they have not shortened any at this late time in the summer does not prove that new specifications are altogether as heavy as formerly. There has doubtless been some diminution in the past few weeks though not much.

The reason promises have not shortened is that promises made some time ago have not all been kept, by any means. Some deliveries have been much in arrears, while deliveries henceforth are likely to be more in keeping with the promises. Thus delivery times are tending to shorten while delivery promises have not.

There being no price competition in the market it is natural enough that there should be some other kind of competition, and the competition two or three months ago was in promises. Apparently the mills felt that the heavy demand would not continue, hence they were anxious to pile up as much business as they could get.

No new domestic line pipe seems to have been placed recently. The National Tube Co. is working on a line for British Columbia, besides the line for Colombia, South America, recently reported. The big gas line from Amarillo, Tex., talked of for a long time as likely to be laid to Kansas City, has taken a new twist, as there is talk now of carrying the gas to Denver instead. It is said this would involve about 400 miles against 450 miles to Kansas City, 20-inch pipe in each case.

Merchant pipe buying is still quite active, although perhaps not altogether as heavy as a month or two ago. There being no stocks, buying keeps up with consumption. Fairly prompt deliveries are being made.

Steel mill operations continue to furnish surprises by the remarkably heavy production. Early in August the prediction was that the month would run a little ahead of July in production. Late in the month estimates were that June also would probably be exceeded. The official report of production, however, now shows that May also was passed, the August output being the heaviest since April.

Business Is Steady

While last year was a record year in steel production, there was quite a dip in the summer. This year there was only a slight dip. The first six months of this year gained 8.3 per cent in tonnage over the first six months of last year, but July and August ran 17 per cent over the corresponding months of last year, whereby this year's production to September 1 is 10.5 per cent above production in the eight months of last year. Evidently this year will show in the neighborhood of 10 per cent more steel made than last year. Two record years in succession would make a remarkable performance, without there being any such gain from the one year to the other.

Tubular goods are probably contributing to this gain, over last year, more than any other line. Freight car building has been lighter this year than last, and structural steel has shown no particular gain. Automobile production has been heavier, but this does not account for a great deal of steel. Consumption in various miscellaneous lines has probably increased very materially.

By superficial comparisons the Steel Corporation's unfilled tonnage report for August would be called unfavorable, as there was a 60,187-ton decrease in August against an increase of 123,880 tons in July. There was a decrease in each of the first six months of the year, and decreases in July and August would be expected, as there were seasonal shipments in several lines without there being corresponding new buying, the lines being out of season as to buying. Rails are a typical illustration of this. The July increase was somewhat out of line with conditions as generally known, and was never satisfactorily explained.

Finished steel prices continue firm all along the line in the general area. There is some shading of plates along the seaboard.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at the principal United States ports for the week ended September 11 totaled 1,219,000 bbls., a daily average of 174,142 bbls., compared with 1,402,000 bbls., a daily average of 200,286 bbls. for the week ended September 4, and a daily average of 178,892 bbls. for the four weeks ended September 11.

At Atlantic Coast Ports—	
Baltimore	75,000
New York	599,000
Others	184,000
Total	858,000
Daily average	122,571
At Gulf Coast Ports—	
Galveston district	58,000
New Orleans and Baton Rouge	303,000
Total	361,000
Daily average	51,571
At All United States Ports—	
Total	1,219,000
Daily average	174,142
Daily average four weeks ended	178,892

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended September 11 totaled 568,000 bbls., a daily average of 81,143 bbls., against 537,000 bbls., a daily average of 76,714 bbls. for the week ended September 4, and a daily average of 89,750 bbls. for the four weeks ended September 11.

At Atlantic Coast Ports—	
Baltimore	191,000
New York	304,000
Philadelphia	73,000
Total	568,000
Daily average	81,143
At Gulf Coast Ports—None.	
Total Atlantic and Gulf Coast ports	568,000
Daily average	81,143
Daily average four weeks ended	89,750
Distribution of total California oil follows:	
Crude	75,000
Gas oil	73,000
Fuel oil	420,000
Total	568,000

SATURATION POINT FOR AUTOS NOT NEAR

John J. Raskob, chairman of the finance committee of the General Motors Corp. board, says: "So far as General Motors is concerned, I think sales in the present automobile year, which began August 1, will be as good as they were in the year just closed. The stability of the automobile industry has always been the subject of considerable discussion and there seems to be a tendency to confuse stabilization and the much discussed 'saturation point.' A study of new car registration figures indicates real stability and does not indicate that the 'saturation point' has been reached. The replacement business has an importance far greater than has generally been assigned to it. At present there are approximately 20,000,000 cars in use in the United States and Canada. It seems quite likely that the number of automobiles in use will reach the 25,000,000 mark within four or five years, so that the replacement business alone should, before long, at least equal the present volume of the industry without taking into account export demand or such additional domestic demand as will come from the natural growth of the United States in population and wealth."

M. A. QUILTER DIES

HOUSTON, Tex., Sept. 18.—Maurice A. Quilter, oil well contractor and producer in the Humble Pool, died at his home in this city, after a brief illness. He was 43 years old and well known in all the pools.

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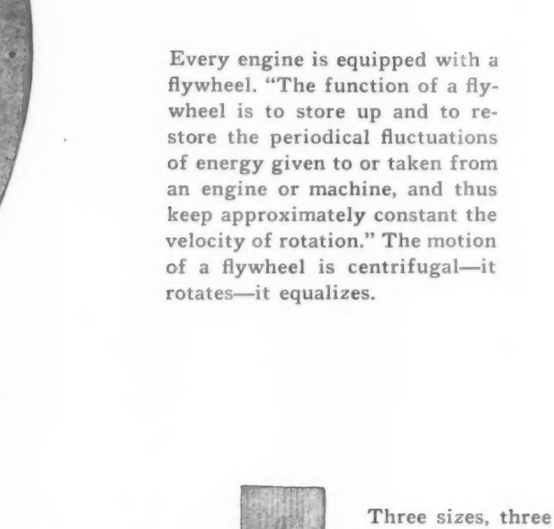
To put a flywheel on a string of sucker rods is obviously impractical. However, it has been found possible to make the bandwheel serve the purpose of a flywheel, thus also increasing its own efficiency. The motion of a bandwheel is centrifugal—it rotates, and by placing an O. C. S. Equalizer properly upon it, the bandwheel becomes a flywheel—it stores up energy created by the falling rods, and carries it over to the load side of the revolution when the rods and load are being lifted, maintaining a smooth, even motion throughout the cycle.

The O. C. S. Equalizer is more than a counterbalance—it equalizes.



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THE TERM OF THE LEASE: WHAT IT MEANS TO THE LESSOR AND LESSEE

By Lawrence Mills

By "the term of the lease" is meant that period of time, during which the lessee is entitled to hold the leased premises, for the purpose of exploration and production. The modern lease is a very involved and technical instrument. Every word in it has been most carefully chosen to meet some contingency that experience has suggested, or to comply with some ruling of the courts. By taking the lease to pieces, as you would a watch, and examining its parts, it will be found that its duration is affected by three separate provisions, or clauses; first, the fixed, or primary, term; second, the extension clause; third, the drilling clause. The Producers' 88 form will be taken for purpose of dissection, on account of its widespread use. The fixed term, together with its companion, the extension clause, will be first considered; and afterwards, the effect of the drilling clause will be discussed.

Early Day Leases

Following the discovery of oil in Pennsylvania in 1859, oil and gas leases were nearly all taken for a period of from 15 to 25 years. It was not known how long the land would continue to produce, but it was not thought that it would extend beyond that time. But the productive life of the early fields was longer than had been anticipated and, as a result, many of the leases terminated by the expiration of the term, before the exhaustion of the productivity of the land. As a consequence of this experience, the producers thereafter insisted upon inserting in the lease form, after the fixed term, a clause to this effect: "and as long thereafter as oil or gas is produced." So that thereafter the leases were for a term of from 15 to 25 years and as long thereafter as oil or gas was produced. In the modern form, the fixed or primary term has been greatly shortened, but the extension clause has been retained. in the Producers' 88, the term is for five years "and as long thereafter as oil or gas, or either of them, is produced from said land by the lessee."

If there is no extension or "thereafter" clause, the lease terminates and ends upon the expiration of the fixed term of five years. Many valuable oil properties reverted to the landowners in Pennsylvania, in the early days, because the time for which the land was leased, expired, while it was still producing. Even when the extension clause is present, the finding or producing of oil or gas, during the fixed term, is a condition precedent to the right to produce under it, after the expiration of the five-year term. If the lease is not producing, at that time, it terminates and ends, just as it would in the absence of the extension clause; not by virtue of a forfeiture, as for a violation of the drilling clause, but by the expiration of the term for which the leasehold was limited. The bringing in of a gusher in a well which the lessee was drilling at the time, a day or even an hour late, will avail him nothing.

Where Lease Covers Several Tracts

If, however, production is secured within the fixed term, it extends the lease so long as that condition shall continue. And, on the principle of the indivisibility of the lease contract, where the lease covers several tracts of land, although they may have passed into the ownership of different parties, since the execution of the lease, a producing well upon any of the tracts will extend the fixed term as to the other tracts. And this is true, although the lease upon the several parts has come to be owned by different parties, and there is no privity of interest between the one who drilled the producing well and the owners of the lease upon the other parcels. But, of course, under such circumstances, the different tracts could not be held indefinitely, by production on one tract, without violating the implied covenant for development.

As to what production, during the term, is sufficient to extend the lease, it is difficult to give an answer that will hold good in all of the different states, and under all circumstances. Where the requirement of production in paying quantities is absent, it is usually held that the element of paying quantities will not be implied. But there must be an actual production, above ground, of oil or gas in such quantities as to be susceptible of division. A mere showing of oil or gas is not sufficient. The production must be tangible and substantial, but it need not be great, or in paying quantities.

Discovery Deemed Sufficient

While the above statement expresses the general rule, the Oklahoma and West Virginia courts have held, in several cases, that the discovery of oil or gas, within the term, although none was actually produced, was sufficient. And that if a producing stratum was encountered, within the term, the lessee might continue drilling operations; and if further production was discovered, after the expiration of the five years, the lessee might produce therefrom or plug back to the sand first encountered.

When the fixed term has expired and the lease is being held on production, when the wells cease to produce, on account of the exhaustion of the wells, the lease will terminate. But a temporary loss of production, for a cause that can be remedied, such, for example, as an accident to the well, will not work a termination, provided the lessee is diligent in his efforts to restore production.

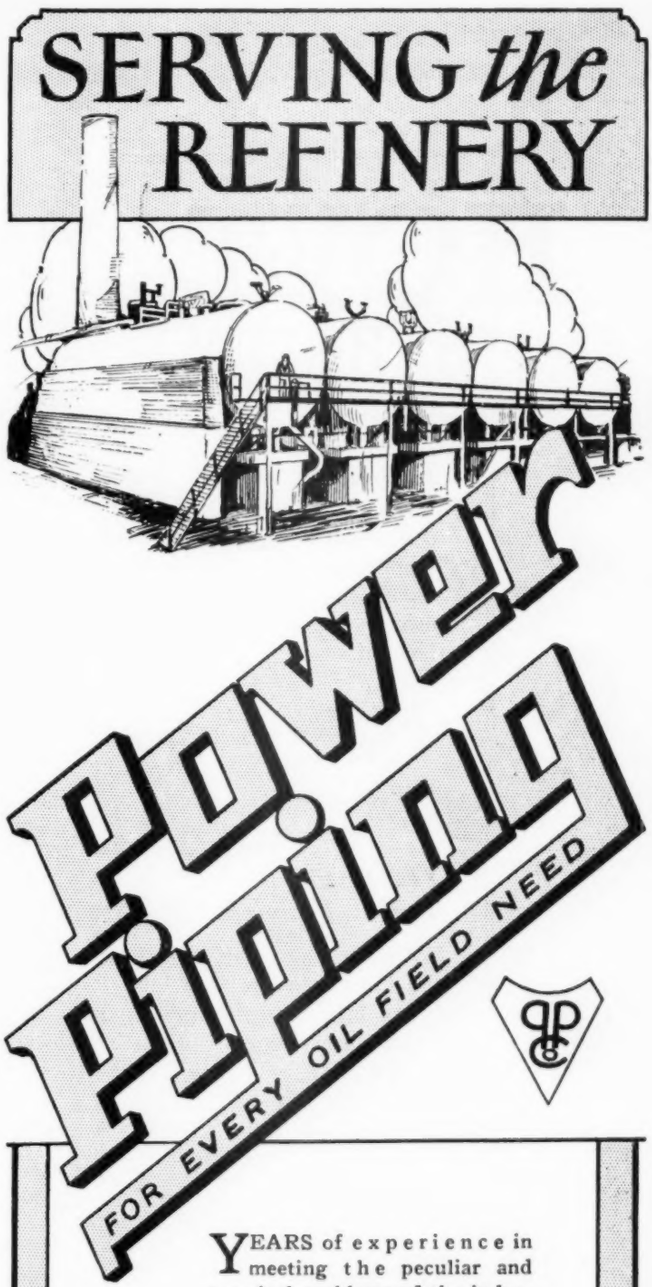
"In Paying Quantities"

Many of the leases provide that the production, under the extension clause, must be in paying quantities. The phrase "in paying quantities," has, in the law of oil and gas, more than one meaning. In determining the obligation of the lessee to drill an offset well, the production from the well which it is sought to have offset must be in paying quantities, considering both the cost of drilling the well and of operating it, when drilled. Likewise, in a drilling contract where one of the parties undertakes to drill a well to a certain depth, unless oil or gas in paying quantities is found, at a lesser depth, the measure is the cost of drilling and operating the well. A different construction, however, is given the words in the extension clause. The well, having been drilled and the cost of such drilling incurred, the lessee is entitled to operate the lease if, and as long as it returns a profit above the actual cost of operation, without taking into consideration the cost of the well itself.

In the Case of Gas

In the case of gas, especially where the lessor receives a fixed yearly sum, as royalty, regardless of the size of the well, it is generally held that the determination by the lessee of the question as to whether the production is in paying quantities, when exercised in good faith, is conclusive. If he is willing to pay the rental, upon the assumption that gas is being produced in paying quantities, the lessor has no cause for complaint and is bound by his decision. In the case of oil, however, where the royalty depends upon the amount produced, there is a conflict of authority. Some courts follow the same rule that is applied to gas and hold that the determination, by the lessee, when exercised in good faith, is final. Other courts, however, while according due weight to the decision of the lessee, do not feel themselves bound by his judgment in the matter, while other courts hold, as to both oil and gas, that the question of production in paying quantities is one of fact.

We now come to a consideration of the effect of the drilling clause upon the fixed term. At the beginning of the petroleum era, the lands leased were usually in small tracts, located close to production, and intended for immediate development. As a consequence, these early leases invariably contained a drilling clause, requiring the drilling of the initial well within a few months, under penalty of forfeiture in case of default. It will



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thus be seen that the drilling clause has been a part of the lease from the very beginning, and that the fixed term has been subject to be defeated, prior to its expiration, for a violation of its conditions.

At first there was no provision authorizing the lessee to defer the drilling of the initial well; but, as the business expanded, the practice arose of securing leases in advance of development. This required a modification of the drilling clause, as the lease was not procured for the purpose of immediate drilling. Accordingly, a provision was inserted in the lease, permitting the lessee to defer the drilling of the initial well, upon the payment of a rental for delay. It seems plain that the delay rental provision is a part and parcel of the drilling clause. Under it, the lessee has the option to save the lease from forfeiture, prior to the expiration of the term, by one of two alternatives. He may drill the well, or he may pay the rental. If he does either his rights under the lease are preserved. If he does neither, they are lost.

Alternative Provisions

Bearing in mind the alternative provisions of the drilling clause, we may consider what relation that clause, as a whole, bears to the lease, and what function it performs in that instrument. The decisions are in great confusion upon this subject and a discussion of its legal aspects would, necessarily, be technical and out of place in a paper of this kind. It may be broadly stated, however, that the fixed term is the term proper, which is qualified, or limited, by the drilling clause, as a condition subsequent. The lease is not for one year, with the privilege or option of extending it for five years, by the payment of rental, but for five years, subject to be terminated sooner, by a forfeiture under the drilling clause, for a failure either to drill the initial well, or to pay the stipulated rental.

An Important Point

I am often asked, in my practice, if the commencement of a well within the five years, would not give the lessee the right to complete it, after the expiration of the term. It would not, for this reason. As a consequence of the relation of the drilling clause, to the fixed term, the five-year term may be shortened, but cannot be extended, by the drilling clause. In order to hold the lease, under the extension clause, it is imperative that production be secured within the term. But the condition of the drilling clause is complied with by the commencement of a well at any time, within a year from the last rental payment. Consequently, in the last year of the lease, in order to hold it, after the five years, the well must be commenced, under the drilling clause, and completed, as a producer, under the extension clause, within the term.

If the lessee fails to drill the well,, or to pay the rental for delay, the lease may be forfeited. On this point, there is no conflict of authority, whatsoever. The only question is whether it terminates, ipso facto, upon such failure, or whether some affirmative action, upon the part of the lessor is necessary. Upon this point, a distinction has been made between the "or" and the "unless" lease. Under the "or" form there is a division of authority. Some of the courts hold that it terminates, ipso facto, while others hold that the lessor must take some action equivalent to a declaration of forfeiture. Under the "unless" form, the decisions are practically unanimous in the holding that the lease comes to an end automatically, upon breach of the provisions of the drilling clause.

The drilling clause usually provides that the lessee "shall commence a well" or "commence operations," within a certain time. Under the Producers' 88 form, the provision is, "If no well be commenced on said land on or before," etc. These provisions mean practically the same thing, and the courts do not make nice distinctions between them. The purpose of them is that actual physical operations leading up to the testing of the premises shall be begun within the time stipulated, and carried forward, with good faith and reasonable diligence thereafter. The staking of the location, the digging of the slush pit, and the unloadng of the timbers for the derrick, upon the lease, upon the last day, is a sufficient compliance, without actually making hole. But a mere spudding in, which is not followed by actual drilling operations, within a reasonable time, is not a commencement, within the meaning and intent of the lease.

RUMANIAN PRODUCTION REACHES HIGHEST MARK

By Charles E. Kern
Washington Bureau,
The Oil and Gas Journal,

WASHINGTON, D. C., Sept. 18.—Rumanian production of crude oil in 1925 amounted to 2,316,504 metric tons, the highest figure in the history of the Rumanian industry and an increase of about 25 per cent over the 1924 production of 1,185,303 tons, according to a report from Consul Ely E. Palmers at Bucharest.

This is the largest proportional increase of any one year since the war, although there has been a progressive increase in quantity, the 1920 production having amounted to 1,034,138 tons. In 1925 the production exceeded for the first time the prewar record figure of 1,895,619 tons in 1913.

Exports of Rumanian petroleum products in 1925 also reached a record figure, amounting to almost 800,000 tons. This was the largest exportation since the war, and even before the war was exceeded only in 1912 and 1913.

It is noted that production was much larger in 1925 than in 1913. Failure of exportation to attain the prewar record is explained by the fact that the exportation of fuel oil was prohibited by the Government in the first half of the year.

The importance of this product from an export standpoint is shown by the fact that in 1913 it formed 33 per cent of the total exportation of petroleum. Total exports in 1913 amounted to 55 per cent of the production, although exports in 1925 were the highest, proportionally, of any since the war, amounting to 34 per cent of the year's production. This is still far short of the 1913 proportion.

CHEMISTRY AND OIL IN WORK OF THE WORLD

Chemistry, in the World's Work, by Harrison E. Howe, is the title of a most interesting illustrated book of 244 pages which has just appeared from the press of the Van Nostrand Co.

The author tells in words we all understand of the part of the chemist has played in the advancement of our present civilization. The isolation of '49, when the speed limit was 10 miles per day, has passed into history before the throbbing of the motor that does 60 miles an hour over paved roads. The quality of steel and the perfection attained in the manufacture of cement are evidences of applied chemistry.

The derivation and the application of gasoline is explained. There is also an explanation of the influence of knocking and the use of tetrahthyl lead as an antiknoek compound. There are several pages relating to the wonderful contribution the petroleum industry has made to the comfort and pleasures of all people through illumination. One of the excellent illustrations represents a modern oil refinery; it is a view of a well-known plant near Tulsa.

Many examples are presented of the contributions which chemistry has made in the elimination of waste, the development of agriculture and the care and improvement of foods.

The chemistry of cloth and the story of the perfection of the artificial silk industry forms an especially fascinating part of the book. Artificial silk and the preparation of the most modern of paints are shown to be closely related to the manufacture of explosives.

These few references but partially indicate the nature of this book, which is well printed in good type. Anyone interested in the fundamentals of our industries and the value of industrial research will find the book well worth reading.

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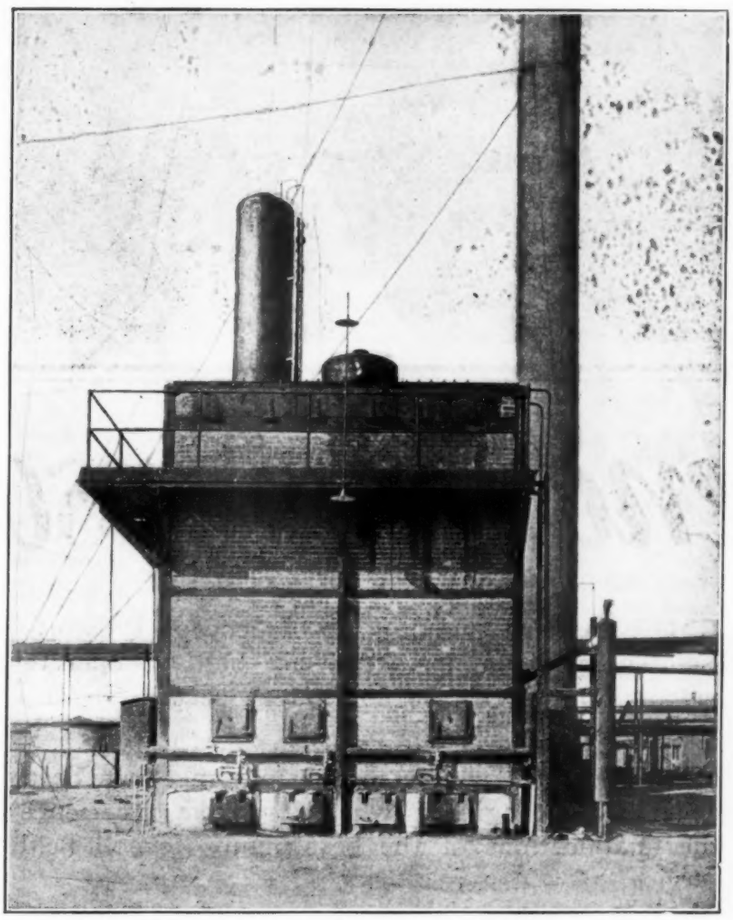

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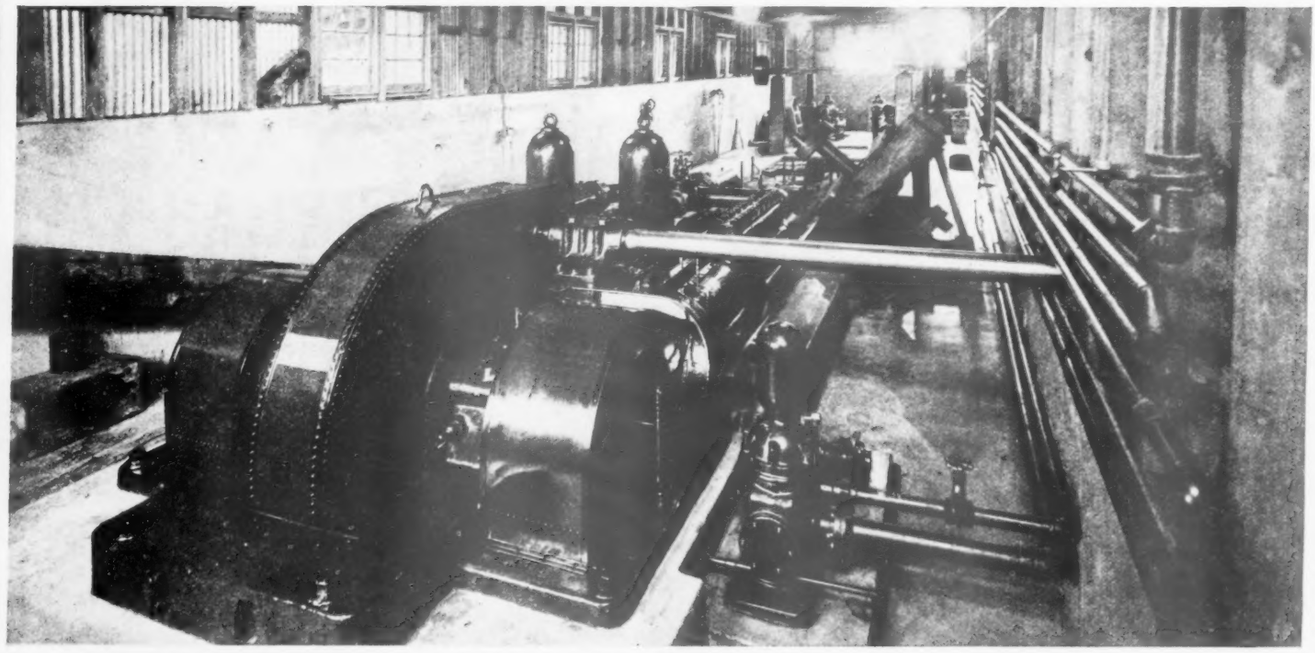

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THE PRESCOTT COMPANY
FRED M. PRESCOTT, President
Menominee, Michigan, U. S. A.

SOUTHWEST TEXAS

(Continued from Page 56)

ston DeArkos' No. 1 de la Garza, in Block 22, Survey 335, 200 feet from the south line and 440 feet from the west lines, has derrick up.

Cole Gas Field

Cole Petroleum Co. in the Cole Gas Field in Webb County, in Block 9, Survey 8, No. 23 Benavides has been temporarily abandoned at 2,225 feet.

Somerset-Atascosa

Hamilton's No. 14 Hughes, in the extreme western part of the Somerset Field in Atascosa County, has set and cemented casing.

Somerset-Bexar

In Bexar County section of the Somerset Field, Mike Glasscock's No. 6 Sarah Smith has completed a 4-bbl. well at 1,480 feet.

Bastrop County

Five miles south of Smithville, Neal & Nelson's Arthur Naumann is ready to bail.

Luling-Caldwell

Swearingen & Richards' No. 2 M. J. Tiller has set casing at 2,125 feet; it is a 100 bbl. well.

Ina Field-Medina

The Texas Company's No. 1 Viola Wilson, 300 feet north of Arnett No. 3, in Medina County, is drilling. Arnett Oil Co.'s No. 4 Nixon, 2,100 feet south of No. 3, is bailing. A 4-inch liner has been set. Magnolia Petroleum Co.'s No. 5 Schmidt, a shallow well, is being equipped with a larger rig and will be drilled to the Edwards lime.

Adams Gas Field-Medina

Western Gas & Fuel Co. (subsidiary of Southern Gas Co.) northwest of Henderson & Holden gas wells in its No. 1 Adams has set 10-inch casing at 175 feet. Witherspoon Oil Co.'s No 1 Adams is being changed from a spudder to a larger rig.

LOCATIONS IN NORTH TEXAS AND PANHANDLE

(Continued from Page 41)

feet north and west SE cor. of same 20-acre lease; No. 6, 200 feet north and 150 feet west SE cor. same 20-acre lease; No. 7, 750 feet north and 150 feet west SE cor., all in R. I. Carter's 20-acre lease and located in Section 1, H. T. & B. Survey, A-124. Clark & Campbell's No. 1 Ward & Todd-E, 476 feet south and 155 feet east NW cor. Lot 14, Ward & Todd Subdivision, and located in Section 6, G. C. & S. F. Survey, A-625; No. 1 Ward & Todd-I, 772 feet south and 170 feet east NW cor. Lot 14, Ward & Todd Subdivision and located in same section and survey; No. 1 Ward & Todd-J, 771 feet south and 476 feet east NW cor. Lot 14, Ward & Todd Subdivision and located in same section and survey. R. R. Clark and others' No. 9 Ward & Todd, 458 feet north and 550 feet east SW cor. north 25 acres, Lot 13, Ward & Todd Subdivision, and located in A. B. & M. Survey, No. 11, A-339. Craig & Wilson's No. 3 J. E. Hobson, 1,075 feet north and 237 feet east SW cor. north 220 acres, Section 6, G. C. & S. F. Survey, A-364.

W. Hammon and others' No. 1 A. W. Brockridge, 150 feet north and east SW cor. south 80 acres, north 138 acres, M. E. P. & P. Survey No. 876, A-230. Hereford Oil Co.'s No. 4 C. A. Allingham-A, 450 south and east NW cor. Section 32, Block 5, H. & T. C. Survey. T. F. Hunter's No. 1 H. B. Hines, 150 feet north and east SE cor. north 40 acres, west 80 acres. H. B. Hines 200-acre tract and located on T. F. Hunter's 10-acre tract Section 11, H. & G. N. Survey, A-147. J. Leath and others' No. 1 A. F. Fasselt, 5,036 feet south and center of road and 321 feet west of east line, Section 3, S. A. & M. G. Survey, A-267. Panhandle Refining Co.'s No. 1 Riley-Griffin, 1,400 feet north and 1,000 feet west SE cor. Lot 6, William H. Spillers Survey, A-257, and located on heirs of Floyd Jordon Survey, A-167. W. F. Ramming and others' No. 1 W. F. Ramming, 1,050 feet north and 150 feet west SE cor. east 30 acres, south half W. F. Ramming's 160-acre tract out of Section 4, H. T. & B. Survey, A-474. Ray-Art and Consolidated's No. 1 R. S. Allen, 150 feet north and 750 feet east SW cor. NE, Section 329, Waggoner Colony Lands, R. M. High Survey, A-499. Skelly Oil Co.'s No. 14 C. Ramming, 450 feet south and 750 feet west NE cor. 110-acre lease out of Section 1, H. T. & B. Survey, A-124; No. 7 R. & B. Ramming, 200 feet north and 150 feet west SE cor. 30-acre lease, R. & B. Ramming's 260-acre tract and located in Section 1, H. T. & B. Survey, A-124. Stidham & Thrasher's No. 2 Ward & Todd, 796 feet south and 322 feet east NW cor. Lot 14, Ward & Todd Subdivision, and located in G. C. & S. F. Survey, No. 6, A-625. The Texas Company's No. 313 W. T. Waggoner, 1,433 feet north and 998 feet east SW cor. Section 13, H. T. & B. Survey, A-137.

Wilbarger County

Milham Corp.'s No. 6 W. T. Waggoner-B, 450 feet south of north line and 1,049 feet west of east line "B" lease out of Section 31, Block 4, H. & T. C. Survey; No. 8, W. T. Waggoner-H, 155 feet north and 490 feet west SE cor. 34-acre lease "H" Section 42, Block 4, H. & T. C. Survey; No. 9, 155 feet north and 825 feet west SE cor. same 34-acre lease. Phillips Petroleum Co.'s No. 1 W. T. Waggoner-H, 220 feet north and east SW cor. NE SW, Section 45, Block 4, H. & T. C. Survey. Waggoner Refining Co.'s No. 2 W. R. Waggoner-D, 1,470 feet north and 2,190 feet west SE cor. Section 47, Block 4, H. & T. C. Survey.

Archer County

L. T. Burns' No. 1 J. H. Turbeville, 520 feet south and 150 feet east NW cor. east 20 acres, north 40 acres, south 80 acres of west 113 acres of Robert Carson Survey, No. 171, A-77. Consolidated Oil Co.'s No. 19 W. P. Ferguson-A, 450 feet south and east NW cor. SW NW, Section 2, S. P. R. R. Survey, A-1,199. T. F. Hunter's No. 1 Mrs. J. E. Parrish, 150 feet south and west NE cor. Section 8, Hooper & Wade Survey, A-957. Kentucky Oil and Empire Gas & Fuel Co.'s No. 1 Wilson McCrory-C, 1,170 feet south and 1,470 feet east NW cor. Lot 1, Section 70, A. T. N. C. L., being 150 feet north and east SW cor. 40-acre lease. Litchfield & Decker's No. 1 John Ground, 150 feet south and east NW cor. east 55 acres, west 110 acres, north 220 acres, south 320 acres, Section 20, Block 1, H. & T. C. Survey, A-1,198. Shappell Oil Co.'s No. 1 G. B. Yeatts and others, 150 feet north and west SE cor. Lot 8, Block 2, Coffman-Yeatts Subdivision, Section 6, A. T. N. C. L. Survey. Simms Oil Co.'s No. 8 Mrs. J. H. Turbeville-A, 150 feet north and 620 feet west SE cor. 80-acre lease Robert Carson Survey, No. 172, A-106. The Texas Company's No. 7 Mrs. J. H. Turbeville-C, 150 feet south and 1,476 feet east NW cor. 40-acre "C" lease Robert Carson Survey, No. 172, A-106; No. 8, 150 feet south and 152 feet west NE cor. 40-acre lease "C" Robert Carson Survey; No. 172, A-106; No. 9, 442 feet south and 218 feet west NE cor. same 40-acre "C" lease.

Bridwell & Heydrick's No. 2 Abercrombie & Taylor, 150 feet north and 100 feet west SE cor. south 20 acres, east 90 acres, east 90 acres, SW Section 2, S. P. R. R. Survey, No. 2, A-1,281. Cook & Reeder's No. 4 A. M. Kunkel, 150 feet north and 750 feet east SW cor. 20-acre lease, Section 3, B. B. B. & C. Survey, A-51. Golding & Cochran and Philmack Oil Co.'s No. 1 T. B. Wilson, 2,162 feet north and 1,131 feet west SE cor. M. Hutchinson Survey, No. 107, A-172. Magnolia Petroleum Co.'s No. 3 L. L. Hudson, 150 feet south and 1,900 feet west NE cor. south 93.7 acres, Section 80, Club Ranch Subdivision; No. 17 A. J. Lowe, 150 feet south and west NE cor. Lot 2, Crawford Subdivision I. Holman Survey. Murchison & Fain's No. 2 W. J. Logan-B, 740 feet south and 1,600 feet west most easterly NE cor. Allison Arms Survey, A-5; No. 3, 740 feet south and 1,300 feet west most easterly NE cor. same survey. Pandem Oil Corp.'s No. 3 L. L. Hudson, 150 feet north and

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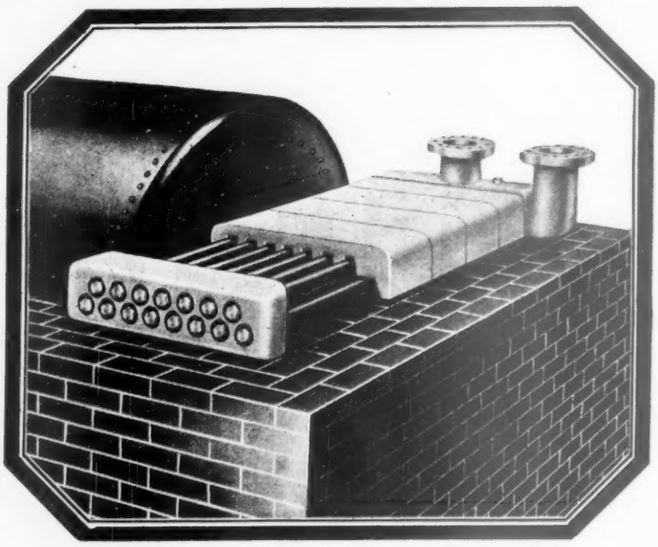

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THE Marley Steam Superheater is a necessary addition to any plant. It makes appreciable savings in fuel and increases the capacity of the plant, too. In addition, it eliminates all rear arch troubles—as it acts as the rear arch itself. It also eliminates difficulties and risks due to water and moisture in high pressure steam lines. Many now in use and giving extreme satisfaction.

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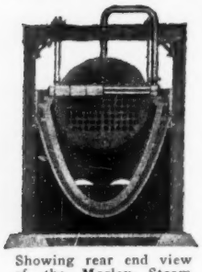

Showing rear end view of the Marley Steam Superheater

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1,250 feet east SW cor. west 80 acres, north 93 acres, Section 80, Club Ranch Subdivision; No. 8 W. H. Thomas, 1,050 feet south and 450 feet east NW cor. south 50 acres, Lot 5, north subdivision Nathan Thomas Survey, A-454.

Roxana Petroleum Corp.'s No. 5 Abercrombie & Taylor, 770 feet south and 450 feet east NW cor. north 70 acres, east 90 acres, SW Section 2, S. P. R. R. Survey, A-1,281; No. 6 Julius Kreeger, 750 feet south and east NW cor. 40-acre lease, Section 2,434, T. E. & L. Survey. Schermerhorn Oil Co.'s No. 2 R. H. Miller, 150 feet south and 180 feet west NE cor. north 60 acres, Lot 2, A. Rohus Survey, A-1,126; No. 2 H. O. Prideaux, 750 feet south and 150 feet west NE cor. Lot 25, W. J. Fraley Subdivision and located in John Dorsey Survey, A-122. Willard Hill and others' No. 1 M. P. Andrews, 150 feet south and west NE cor. West 40 acres, south 80 acres, west 160 acres, Section 1,826, T. E. & L. Survey.

Clay County

Q. H. Foster's No. 1 H. Sanzenbacher, 150 feet north and east SW cor. NE Section 42, Grayson County School Land, A-156.

Montague County

F. H. E. Oil Co.'s No. 5 N. J. Howard-A, 1,939 feet north and 2,616 feet west SE cor. John Chambliss Survey, A-123. McMan Oil & Gas Co.'s No. 2 N. J. Howard and others, 2,100 feet north and 3,150 feet west SE cor. John Chambliss Survey, A-123, being 150 feet south and 208 feet east NW cor. their lease. The Texas Company's No. 1 Fannie Riddle, 87 feet north and 150 feet east SW cor. N. J. Howard and others' 68-acre tract and located on Fannie Riddle 1-acre tract out of E. Votaw Survey, A-827. Texhoma Oil & Refining Co.'s No. 1 J. W. Rowland and others-B, 150 feet north and east SW cor. east 105 acres, J. W. Rowland and others' 245-acre tract out of E. Votaw Survey, A-827; No. 10 J. W. Rowland, 150 feet north and 539 feet west SE cor. 71-acre lease John Chambliss Survey, A-123; No. 1 N. J. Howard and others-B, 3,750 feet north and 2,475 feet west SE cor. John Cahbliss Survey, A-123, being 150 feet north and west SE cor. 40-acre lease; No. 2 Mrs. S. F. Loy and others, 321 feet south and 565 feet west NE cor. 48.5-acre lease out of Mrs. S. F. Loy and others' 218-acre tract out of W. Donoho Survey, A-178; No. 4 E. J. Bouldin-A, 1,540 feet north and 150 feet west SE cor. 80-acre lease "A" out of John Chambliss Survey, A-123. Frank M. Green and others' No. 1 T. D. Wilson, 1,800 feet SW of NE line and 200 feet SE of NW line SE 320 acres T. D. Wilson's 631-acre tract out of J. J. Morton Survey, A-487.

Cooke County

C. C. Lanier's No. 4 A. Hyman, 450 feet south and 150 feet east NW cor. west 40 acres, north 80 acres, east 113 acres, south half T. J. Moss Survey, A-736; No. 5, 1,050 feet south and and 150 feet east NW cor. west 40 acres, north 80 acres, east 113 acres, south half same survey. Hooser Oil Co.'s No. 7 J. A. Dennis, 150 feet north and east SW cor. east 160 acres, north half T. J. Moss Survey, A-736. Sun Oil Co.'s No. 2 A. Hyman, 150 feet north and west SW cor. north 47.5 acres, west 95 acres, west 208 acres south half T. J. Moss Survey, A-736; No. 3, 450 feet south and 150 feet west NE cor. 47.5-acre lease, same survey. Max Westheimer's No. 1 Mrs. William Franklin, 150 feet south and 200 feet east SW cor. Lawrence Ramey Survey, No. 15, A-878, and located in A. Rodriguez Survey, A-851. E. P. Zoch's No. 1 T. T. Pace, at center of west 80 acres, north 400 acres, south 792.5 acres Ambrose Hilburn Survey, A-441.

Young County

Bridwell & Mayfield's No. 5 H. B. Street, 150 feet north and east SW cor. NE Section 2,444, T. E. & L. Survey. Chenault & Lea's No. 8 R. H. Rachuig, 150 feet north and east SW cor. 20-acre lease out of Section 4, B. B. B. & C. Survey, A-1,838. Evans and others' No. 4 J. P. Logan, 150 feet north and east SW cor. SE, Section 24, Young County School Land, A-1,284. Pandem Oil Corp.'s No. 7 H. L. Whitehead, 450 feet south and east NW cor. 40-acre lease Section 166, T. E. & L. Survey. Panhandle Refining Co.'s No. 2 R. O. Prideaux, 150 feet north and 450 feet east SW cor. A. McMullen Survey, A-198. Rufffff and others' No. 4 Graham Stewart, 1,890 feet south and 2,460 feet west NE cor. David Dawson Survey, A-76. Simms Oil Co.'s No. 3 T. J. Routon, 1,062 feet north and 150 feet west SE cor. 80-acre lease, Section 181, T. E. & L. Survey. Wo-Mac Oil Co.'s No. 6 Graham Stewart, 1,854 feet south and 362 feet west NE cor. Davis Dawson Survey, A-76. Pitzer & West's No. 8 M. V. Keller-C, 660 feet south and 200 feet west NE cor. east 50 acres, south 100 acres, M. V. Keller's 153.5-acre tract out of Section 1,103, T. E. & L. Survey.

Haskell County

S. S. Kouri and others' No. 3 Ballard Ranch, 4,160 feet north and 5,480 feet east SW cor. John Cameau Survey, A-90, being 200 feet north and east SW cor. Lot 199.

Scurry County

The Northwest Co.'s No. 1 T. C. Stinson, 330 feet south and 990 feet east NW cor. SW Section 101, Block 97, H. & T. C. Survey.

Fisher County

Gillette & Hickey's No. 1 M. E. Young, 1,350 feet north and 150 feet west SE cor. west half Bredida Tevanio Survey, No. 190. R. W. Rainey and others' No. 1 J. L. Marberry, 2,340 feet south and east NW cor. Section 56, H. T. & B. Survey.

Jones County

Bateman & Campbell's No. 1 Southard, at center NW NW, Section 43, Deaf & Dumb Asylum Land. Victor H. Morton's No. 1 Culbertson, 660 feet north and 1,320 feet east SW cor. Vincent Bell Survey, No. 6.

Shackelford County

Empire Gas & Fuel Co.'s No. 1 William Poindexter, 2,250 feet south and 1,150 feet east NW cor. Section 49, Block 11, T. & P. Survey. Gwinnup and others' No. 1 W. C. Goodwin, 660 feet south and west NE cor. NE SW, Section 72, Block 13, T. & P. Survey. F. H. Horrell and others' No. 1 M. E. Sidebottom, 150 feet south and 1,325 feet west NE cor. south 100 acres, north 187.5 acres, Section 819, T. E. & L. Survey. M. H. Overlees' No. 1 C. F. Smalley, 660 feet south and west NE cor. north half SE Section 13, Block 10, E. T. R. R. Survey. Roeser & Pendleton's No. 12 W. I. Cook-B, 440 feet south and 417 feet west NE cor. SE SE, Section 84, Block 10, E. T. R. R. Survey. Skelly Oil Co.'s No. 2 J. E. Matthews, 250 feet south and 150 feet west NE cor. NW Section 31, Block 10, E. T. R. R. Survey. The Texas Company's No. 1 W. H. Osburne, 660 feet south and west NE cor. Section 30, University Lands.

Stephens County

Mid-Kansas Oil & Gas Co.'s No. 11 S. H. Hill Acct. 1, 550 feet north and 600 feet west SE cor. Section 1,122, T. E. & L. Survey. Scott & Bateman's No. 1 A. J. Allen, 575 feet south and 350 feet east NW cor. SE Section 34, Block 2, S. P. R. R. Survey. Texas Pacific Coal & Oil Co.'s No. 3 M. E. Bradford, 150 feet south and 1,100 feet east NW cor. south half Section 69, Block 6, T. & P. Survey.

Eastland County

Rown & Morrissey's No. 1 H. Brasheau, 2,450 feet south and 1,550 feet west NE cor. Lot "A" and located in Lot "B" William Van Norman Survey. J. B. Gordon's No. 1 W. H. Hughes, 150 feet south and west NE cor. west 35 acres, north 70 acres, south 160 acres, east half Section 17, Block 2, E. T. R. R. Survey. Humble Oil & Refining Co.'s No. 1 M. B. Martin, 660 feet north and 330 feet west SE cor. M. B. Martin's 120-acre tract Section 48, Block 2, H. & T. C. Survey. Magnolia Petroleum Co.'s No. 1 I. E. Thomas, 330 feet south and east NW cor. east 80 acres, north 150 acres, F. E. Thomas 307-acre tract out of J. Sawyer Survey No. 35.

Callahan County

Cranfill & Reynolds' No. 5 E. E. Henderson, 450 feet north and 150 feet west SE cor. Section 73. Comal County

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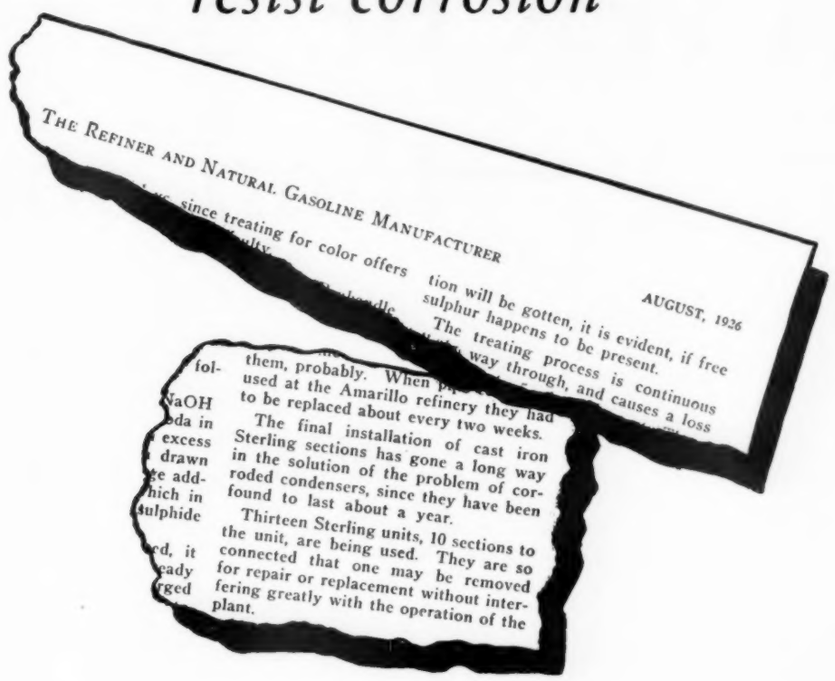
THE REFINER AND NATURAL GASOLINE MANUFACTURER
AUGUST, 1926
them, probably. When
used at the Amarillo refinery they had
to be replaced about every two weeks.
The final installation of cast iron
Sterling sections has gone a long way
in the solution of the problem of cor-
roded condensers, since they have been
found to last about a year.
Thirteen Sterling units, 10 sections to
the unit, are being used. They are so
connected that one may be removed
for repair or replacement without inter-
fering greatly with the operation of the
plant.

STERLING Sections and fittings are made from a special mix of metal that is the result of tests in our plants and laboratories and actual operation in the field. That is why they resist corrosion so successfully.

Sterling Sections outlast other types of condensers and at the same time give increased efficiency, increased accessibility and actually cost less.

The experience of the Amarillo Refinery is the experience of many other refineries in all oil fields.

We shall be glad to send you our illustrated catalog describing these sections in detail—glad to give you the service of our engineers on request.

STERLING OIL SECTIONS

For manifold use-for continuous use-for cooling

AMERICAN RADIATOR COMPANY

MANUFACTURERS of IDEAL BOILERS *for* OIL BURNING

40 WEST 40TH STREET, NEW YORK, N.Y. 816 SOUTH MICHIGAN AVENUE, CHICAGO, ILL.

Sterling Oil Sections are immediately available at our plants in Kansas City, Mo., and Springfield, Ohio

BETTER BE SAFE
—*than sorry!*

for it's easy to get confused in the grade (Tensile strength) of the

WIRE LINE

you buy from a warehouse stock, if you have to depend on tags or marks on the reels.

For years we were obliged to sell under conditions where the chance for dangerous error was great. We had no certain way of checking the grade of Line we sold. We had to depend upon Tags and Reel marking. We did the best we could and YOU TOOK THE CHANCE.

We don't sell Wire Lines
this way any more. It's obsolete and dangerous.

Williamsport Lines are the *only* Lines made where that danger and chance has been eliminated—gone forever. Each grade of Williamsport Lines is marked *at the factory* by the only man who actually *KNOWS* the grade. He weaves a Telfax Tape into and throughout the hemp core of the Line, which states the grade in plain English. This cannot be separated from the Line, no matter how often it changes reels or tags. *MISTAKES cannot "get by."*

No other wire line affords this great protection—and
it is worth *vastly more than the Line costs.*

Why, then, take chances on unmarked Lines?

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School Land; No. 6, 150 feet south and 750 feet west NE cor. south half Section 73, Comal County School Land. Florence Oil Co.'s No. 2 E. LaMar, 450 feet north and 150 feet west SE cor. west 76 acres, E. LaMar 101-acre tract out of Section 90, Comal County School Land.

Howard County

Marland Oil Co.'s No. 3 O. Chalk, 330 feet south and 990 feet west NE cor. south half SE Section 113, Block 29, W. & N. W. R. R. Survey.

Runnels County

F. P. Zoch and others' No. 1 Bruce, at center of SE Section 9, W. C. R. R. Survey.

Coleman County

Fred Morris' No. 1 J. M. Wallace Estate, 1,200 feet north and 3,250 feet west SE cor. J. M. Wallace Estate 423-5-acre tract out of William Farrie Survey No. 279. Van Eman and others' No. 1 J. M. Well, 150 feet north and 950 feet east SW cor. Lot 4, North Subdivision, Manuel Martinez Survey No. 751.

Upton County

McMan Oil Co.'s No. 2 M. L. Baker, 250 feet SW NE line and 250 feet SE NW line NE 80 acres SE 160 acres, NE 640 acres, Mrs. E. C. Broom Survey No. 8. Texas Pacific Coal & Oil Co.'s No. 3 M. Shirk, 1,254 feet south and 330 feet east NW cor. SW Section 5, Block 3, M. K. & T. Survey; No. 4, 1,805 feet south and 330 feet east NE cor. SW Section 5, Block 3, M. K. & T. Survey.

Crane County

Magnolia Petroleum Co.'s No. 2 O'Keefe (University), 990 feet south and 330 feet east NW cor. Section 38, Block 30, University Lands. Prairie Oil & Gas Co.'s No. 1 University Land, 330 feet south and west NE cor. Section 39, Block 30, University Land; No. 2, 330 feet south and 990 feet west NE cor. same section and block.

Reeves County

Deep Rock Oil Co.'s No. 1 Caldwell, at center SW Section 22, Block 58, Township 8, T. & P. Survey. World Oil Co.'s No. 1 W. N. Holder, 1,470 feet north and west SE cor. Section 65, P. B. & W. C. Wilson Survey.

Pecos County

Mid-Kansas Oil & Gas Co.'s No. 1 I. G. Yates, 2,900 feet due west SW cor. Section 60, Block 1, I. & G. N. Survey, and located in I. G. Yates Survey, A-8,195.

Val Verde County

Hiawatha Oil Co.'s No. 1 J. Sellars & Sons, 1,000 feet south and 4,200 feet east NW cor. Section 1,031, G. C. & S. F. Survey. Transcontinental Oil Co.'s No. 1 W. S. Stevenson, 3,250 feet north and 300 feet west SE cor. Section 8, Block 4, I. & G. N. Survey. Williams and others' No. 1 W. T. Holman, 200 feet south and 500 feet east NW cor. Section 5, Block N, G. H. & S. A. Survey.

SOUTHWEST WILDCATS

(Continued from Page 56)

or two. Reiter-Foster Oil Corp. is starting to rig up on its No. 1 Riddle, south of Dale in Caldwell County, where it and others have drilled a number of tests resulting, with some dry and two showing oil and seemingly proving a structure.

Atascosa County

W. G. French's No. 1 Jaksik, near Lemmberg, is drilling at 1,445 feet.

Bexar County

Murphy & Thorklesen, north of Corpus Christi road on the Vick farm, is drilling at 800 feet.

Blanco County

G. L. Jones and E. D. Summerow, in Blanco County, 1½ miles west and up the Pedernales River from Cypress Creek on the 12,500 acres they have under lease, are drilling at 200 feet with a show of oil and gas.

Caldwell County

Fred Adams, near the Calliham well of the North & South Oil Co. in Caldwell County, No. 1 Kelly, is drilling at 2,230 feet.

Concho County

Mullins, Davis & Davenport of San Angelo, in the SW, Section 6, 5 miles northwest of Eden, are rigging up for a test. Elliott, Chandler & Lewis, in the C NE, of Survey 2, 4 miles north of Eden, have rig en route for their No. 1 White & Ledbetter.

DeWitt County

Empire Southern Oil Co., west of Cuero, is preparing to resume operation on No. 1 C. G. Smith.

Duval County

Daniel & Best, Block 1, Subdivision 3, 150 feet from the west line and 300 feet from the east line have the derrick up for No. 1 Taylor. Buffam and others, Block 38, 150 feet from the east line and 660 feet from the west line, are moving in rig for No. 1 Taylor. O'Hern & Seacord's No. 2 Benavides, Survey 174, Block 12, is drilling at 400 feet in rock. Humble Oil & Refining Co.'s No. 10 Singer, northern end of Survey 4, is drilling at 499 feet, and No. 5 Schallert, in north central part of Survey 255, is drilling at 2,901 feet. Humble-Reiter-Foster's No. 1 Kohler, Survey 406, 660 feet from the south and east lines, is ready to spud in, and drilling a water well, and No. 2 Kohler, Survey 168, is ready to spud in. Simms Oil Co.'s No. 1 Schallert, Survey 241, is still busy with a fishing job, and No. 2 Dinn, in Survey 62, has set casing at 2,624 feet and is drilling in lime rock at 2,710 feet. George M. Ball, in No. 1 Roach, in Survey 463, is drilling at 3,170 feet. National Refining-Lewis Oil Co.'s No. 1 Dinn, Survey 668, 200 feet from the east and south lines, are moving on. Humble Oil & Refining Co.'s No. 1 Dowdy, Survey 272, is drilling at 3,190 feet, having cleared hole. Houston Oil Co.'s No. 1 Beal, Survey 571, Block 10, is standing, having tested salt water.

Edwards County

X. K. Stout, 2,000 feet west of No. 1, in No. 2 Peterson, is drilling at 4,100 feet in black lime, which has the characteristic of Pennsylvanian formation.

Gonzales County

Tom Adams and R. D. Kercheval, on the Billings lease near Smiley, have spudded in and are drilling at 340 feet, and are ready to set surface casing. Bristol Oil & Gas Co., on the R. M. Denman lease, 1 mile southwest of Ottine, at 200 feet, has a crooked hole and is moving in a larger rig to straighten the hole. Joseph Bruner's No. 1 P. D. Davis is coring at 1,400 feet.

Guadalupe County

J. M. Davis, on the Weinert lease in Guadalupe County, has the derrick up and is waiting on the rig. On the Payne and Bond block, J. M. Davis, in No. 1 Rosenbrock at 741 feet, bailed a little oil but not enough for a commercial well so will drill to the 1,200-foot sand found in a previous test to be oil bearing.

Hays County

J. E. Rodgers, 2½ miles east of San Marcus at Martindale, 450 feet from the road, in No. 1 Earnest Hohenburg, is drilling at 600 feet.

Jim Hogg County

Moody Oil Corp., Survey 287, Block 13, in its No. 1 Palacious, is standing at 1,600 feet. Hazlitt-Simmons' No. 1 Schroeder, Survey 16, Block 10, 150 feet from the north and west lines, is drilling at 1,480 feet. On Block 247, Hoad and others, in No. 1 Palacious, are drilling at 1,700 feet. National Oil Co.'s No. 1 Allen, on the Wilbur Allen ranch in Survey 23, is drilling at 2,350 feet. O'Byrne and others, on the southwest 40 acres of Block 14 in No. 1 Palacious, is drilling at 1,570 feet in rock. Humble Oil & Refining Co.'s No. 1 Vela, Block 5, Survey 5, has set surface casing at 204 feet. L. M. Holden, in No. 2 Jones, 6 miles east of Hebbronville and 1 mile north of No. 1, tested salt water.

Karnes County

Earl B. Reynolds, Block 43 of the L. B. Reynolds plat, and 1,000 feet south of No. 1 in the No. 2 Butler, is drilling at 1,720 feet. Hole was reduced from 1,600 feet down and is expecting to pick up gas in the next 20 feet.

LaSalle County

DeLange, Eiser Development Co.'s No. 1 fee, in Survey 102, is drilling at 1,335

EDWARD VALVES

"forged steel" for refinery service—

—are designed and constructed to not only meet but to exceed peak pressures and extreme emergencies possible in all refineries—*a wide safety margin.* Edward *Forged Steel* Valves are built for specific performances — their design and construction proves it—*they best fit your requirements.* This is why refinery engineers who want dependable trouble-free service *standardize* on Edward *Forged Steel* Valves.

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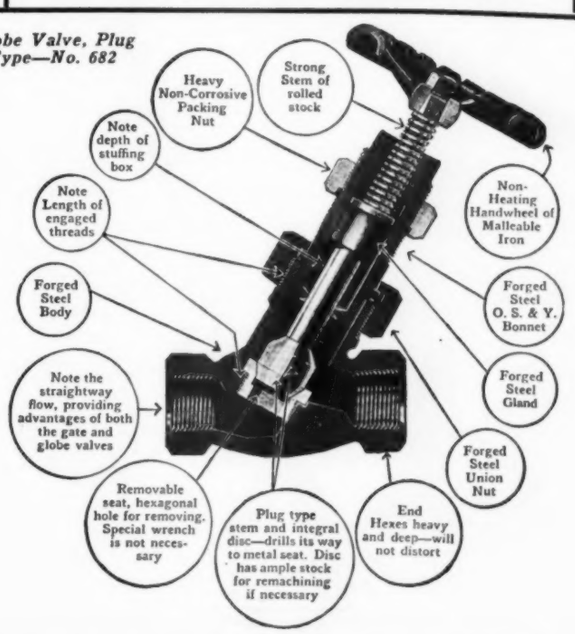
Globe Valve, Plug Type—No. 682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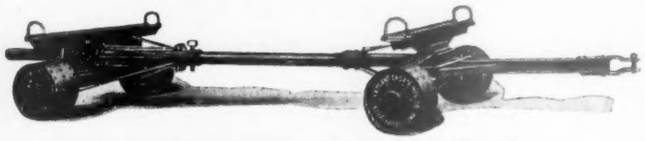

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"Very truly yours,
CENTRAL REFINING CO.
(Signed)
CARL F. CHRISTENSON,
District Foreman."

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Here, at Fort Worth, we maintain a complete stock of genuine Norris Brothers pumping equipment. You may call for sucker rods, balls and seats, drops and seats, or any other equipment, today—and tomorrow the goods will be on your lease.

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feet with hard sand rock, and have been unable to get a core.

Medina County

Schermerhorn Oil Co.'s No. 1 Jungman made a small well, total depth is 1,646 feet. Fennel and others' No. 1 Fohn, in the eastern 100 acres of Survey 115, had a split casing and had to pull and is resetting and will test a showing at 475 feet. No. 4 Medina Valley, of Schermerhorn Oil Co., 300 feet east of No. 1 Jungman, is moving on rig. Golden West, southwest of Castorville, on the Joseph Courand farm, pulled casing at 698 feet and will reset at 1,035 feet on account of cavings. H. W. Ward, in Medina County in Survey 129, has reassembled block. Alamo Drilling & Leasing Co., in Survey 412 on the Kennedy lease, took a 4-foot core which showed oil and is coring again. Cecil Switzer's No. 1 Zerr, which has been shut down at 2,000 feet, is changing to a large cable rig to resume drilling. Well is located in west central part of Survey 459.

Maverick County

Humble Oil & Refining Co.'s No. 1 Hanchett, in Maverick County, half a mile west of the Dimmitt County line, is drilling at 1,370 feet.

Menard County

Elliott, Chandler & Lewis, 14 miles east and south of Menard in Survey 8, have spudded in No. 1 White.

San Patricio County

In San Patricio County, John Sigmund's No. 8 McCampbell, 1,500 feet east of No. 7, is drilling at 2,228 feet in rock. Cores taken have showed gas streaks.

Starr County

Ramsey-Maxey Oil Co.'s No. 1 Kelsey, in Porcion 76, is drilling at 2,000 feet. Simms Oil Co., in Block 8, Share 38-C, 825 feet from the north line and 175 feet from the west line, is moving in for No. 1 Salinas. Pearson and others, in Survey 933, 250 feet from the north and east lines, is moving on for test in No. 1 Garcia.

Terrell County

Cosmos Oil Co.'s test on the Bassett lease, have spudded in for test in Terrell County. E. T. Williams and others, Survey 71, 13 miles southeast of Sanderson, are fishing at 1,825 feet.

Webb County

Cole Petroleum Co.'s No 9 "A" Benavides, Survey 753, Block 7, tested salt water and is standing at 2,865 feet. On Block 5, Survey 3, Cole Petroleum Co.'s No. 10 "B" Benavides, at 3,420 feet, tested salt water, but is continuing drilling. W. A. Wheathley and others, in Block 7, Survey 1,618, 150 feet from the north line and 300 feet from the west line, in No. 1 Reiser, tested a small showing of oil and gas at 463 feet and is drilling deeper. Hadley-Marland's No. 1 DeSpain, in the northeast half of the southwest one-quarter of Survey 49, tested dry in sand at 1,986 feet, and is drilling deeper. C. O. Maddox and others, in Survey 333, in No. 1 Laurel, tested the sand at 2,282 feet which showed salt water. M. J. Bashara's No. 1 Espejo, in Block 75, 222 feet from the west line and 55 feet from the south line, is ready to spud in. In Block 12 of Survey 132, Magnolia Petroleum Co.'s No. 1 Neal is drilling at 3,150 feet, and its No. 1 Paige-Garcia, in Survey 611, 150 feet from the west corner of Survey 139, is drilling at 1,200 feet. Trees Oil Co.'s No. 1 Billings, in Survey 10, is drilling at 2,140 feet. This well is 163 feet from the west line and 2,146 feet from the south line. Lane-Texas, in No. 1 L. W. City, in the city limits of Laredo, is drilling at 2,800 feet. In the northeast quarter of the southwest quarter of Survey 43, Henne, Winch & Killam have made location 150 feet from the north and west lines for No. 1 Billings.

Wilson County

Humble Oil & Refining Co.'s No. 1 Selles, on the Selles farm, 7½ miles from Floresville, is drilling at 1,550 feet. One-fourth of a mile southeast of the center of the northwest line in the Espy lease, the Gibson Oil Corp., in No. 1 Espy, is drilling at 1,400 feet.

Zapata County

Burns & Malone, in Block 38, are preparing to move on for a test on the Bistinente lease, 660 feet from the north and west lines. Earl K. Bateman's No. 1 Garcia, in Block 7, Survey 617, in the center of Zapata County, is drilling at 2,117 feet. Magnolia Petroleum Co.'s No. 1 Cueller, in Survey 278, 150 feet from the north line and 2,260 feet from the east line, is drilling at 2,425 feet. The Texas Company's No. 3 Jennings, southwest of No. 2, is drilling at 2,410 feet.

CANADIAN FIELDS

(Continued from Page 53)

gram. A. M. McQueen, vice president of Imperial Oil, Ltd., who recently returned from the Canadian West, announced after his inspection of the Turner Valley Field, that at least one and possibly two or three more wells will be drilled by Royalite Oil Co. as part of its next year's development program. The decision to extend the scope of operations is taken as evidence of the faith of the Imperial Oil interests in the field. Mr. McQueen declared he was unable to give the location of the new well. The selection will be made early next year, and locations will depend to quite an extent on the results of operations now in progress. In case Royalite Nos. 5 and 6, now being drilled should bring in a crude naphtha production similar to Royalite No. 4, Imperial Oil, Ltd., will find a market for the additional production. The present situation is that there is a huge surplus of gas over the market requirements, and this is receiving the serious consideration of Conservation Commission officials. It is understood that the new Royalite Oil Co. operations will not be attempted till spring arrives, since weather conditions in the late fall and winter create formidable difficulties.

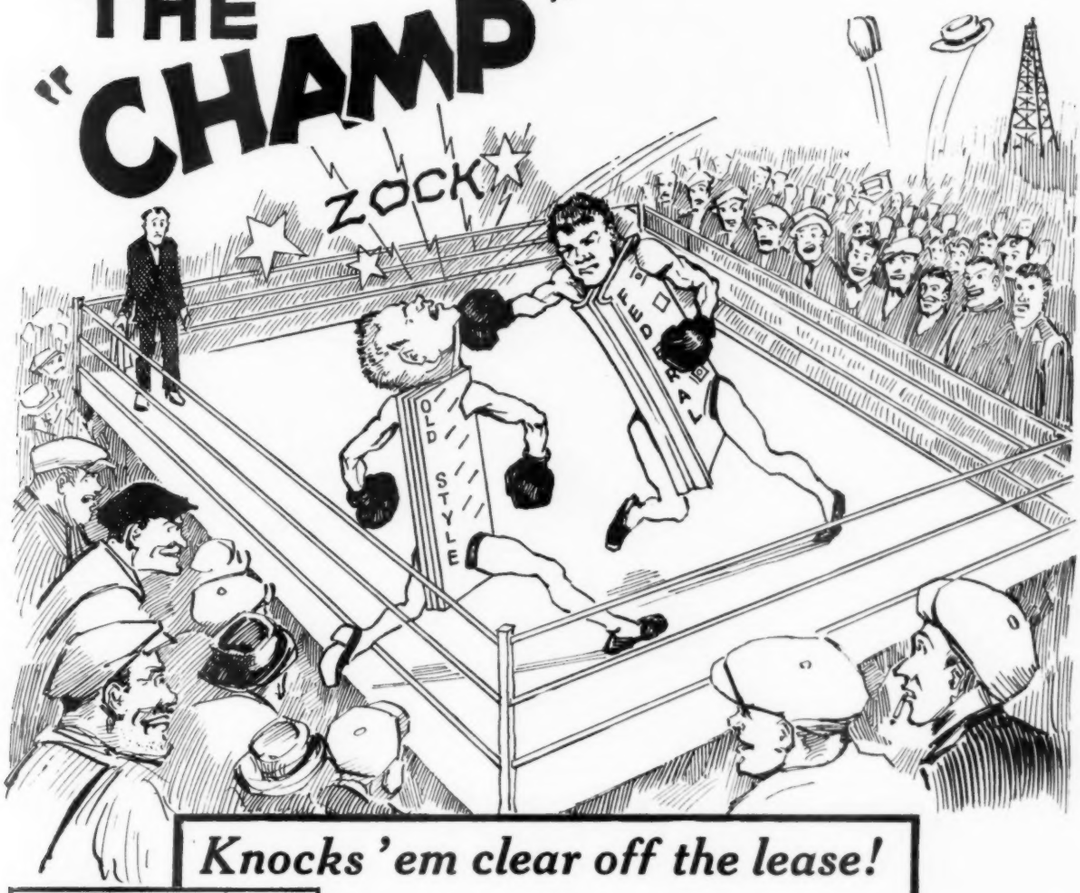
Dalhousie Oil Co., and other Imperial Oil, Ltd., subsidiary, has decided to abandon its No. 3 well, LSD 10, Section 13-20-3w5. This test, the old Alberta Southern No. 1, which some years ago got a small production in the upper horizons, was being continued as a deep test of the Madison limestone. The decision to abandon No. 3 was reached when it was found impossible to pull the old casing which was jammed near the bottom of the hole. It was decided that better time would be made by starting a new hole. This new test, Dalhousie No. 6, will be drilled close to No. 3, and likely on the same section. Dalhousie No. 1, LSD 4, Section 18-20-2w5, is at 3,582 feet and drilling. Dalhousie No. 5, LSD 16, Section 30-19-2w5, is at 2,250 feet and running casing. Dalhousie No. 3 is being plugged with cement and stones prior to moving the derrick to a new location for No. 6.

Drilling Difficulties

Dutch-American Oil Co., LSD 14, Section 4-19-2w5, at 4,327 feet, has drilled about 18 feet past the top string of lost fishing tools in order to grapple the stem. British Dominion No. 1, LSD 4, Section 5-20-2w5, has installed a new drilling line and resumed drilling at 2,300 feet. The 12½-inch casing has been run to the bottom of the hole and will be carried down farther by underreaming. Cooper-Nanton Oil Co., LSD 2, Section 7-20-2w5, has set the 10-inch casing at 3,380 feet and resumed drilling. A small gas flow was struck at 2,800 feet, which is continuing; and traces of lime have been met since the 3,300-foot level was passed.

Home Oil Co., LSD 10, Section 20-19-2w5, has resumed drilling at 2,110 feet after running 12½-inch casing to the bottom of the hole. Before casing was run an accumulation of 50 bbls. of light oil was bailed. The 12½-inch casing will be put down 100 or 150 feet farther by underreaming to take care of any further oil in that distance. It is estimated that 450 feet of additional drilling will carry the test to the bottom of the Dakota sand, which was first encountered at 1,900 feet. In the same general area, Advance Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, got the first oil sand in the Dakota sand at 1,790 feet, corresponding to the sand encountered in the Home well at 1,950 feet. The sand indicates a

THE "CHAMP"



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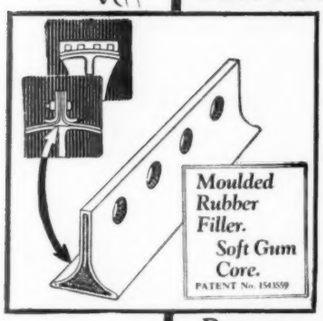

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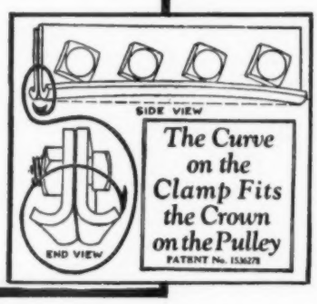

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possible larger production than in the Home which had an estimated potential production of 50 bbls. a day. Advance's No. 2 will be continued to the second sand, when it may be put on the pump.

Illinois-Alberta Oil & Refining Co., LSD 14, Section 12-20-3w5, is reported at 3,687 feet with a diamond drill test. There is about 1,100 feet of 57 degree oil in the hole and considerable gas blowing out of the 4¾-inch casing. The company is planning to carry the diamond drill test some distance below the producing horizon in Royalite No. 4 and McLeod No. 2. Michael Doyle, drilling superintendent of the Sullivan Machinery Co. of Chicago, is in charge of the diamond drill.

Great West Oil Co.'s No. 1, SE, Section 7-20-2w5, has resumed drilling after running the 8¼-inch casing to 4,410 feet. The hole is believed to be near the top of the Madison limestone.

New McDougall-Segur Oil Co., LSD 14, Section 12-20-3w5, at 2,190 feet, encountered a gas flow estimated around 1,000,000 feet a day, in the bottom of the Benton shales. The test is being carried deeper. Calmont Oils, LSD 2, Section 1-20-3w5, is drilling at 2,140 feet after striking a small gas flow at 1,945 feet. New Valley Oil Co., LSD 4, Section 6-21-2w5, is at 1,060 feet and drilling open hole. Okalta Oils, Ltd., LSD 1, Section 1-20-3w5, has the derrick up and is installing machinery. All the equipment except the boilers is on the ground.

Dallas Oil Co.'s No. 1, LSD 11, Section 20-19-2w5, is at 3,100 feet and underreaming. Highland Oils, Ltd., LSD 5, Section 5-20-2w5, is at 1,550 feet and drilling. New Black Diamond No. 1, LSD 1, Section 3-20-3w5, is drilling at 1,150 feet. Rainier Oils, Ltd., has located a test in LSD 8, Section 11-20-3w5. Stockmen Oils, Ltd., Section 27-20-3w5, is drilling at 1,250 feet.

Moose Mountain Field

In the Moose Mountain Field, Signal Hill No. 2, LSD 9, Section 34-23-5w5, is drilling below 1,000 feet. Cerokee Oils, Section 33-23-5w5, is drilling around 1,900 feet. Reserve Oils, Ltd., Morley Reserve, is around 1,900 feet with a diamond drill test. Wabash Oils, Morley Reserve, is rigging up.

On the Sinclair structure, though the entire area in Townships 16, 17 and 18, Ranges 2 and 3, west of the fifth is blanketed by various companies, no active drilling has yet started. Banner Oils, Ltd., has a location in LSD 7, Section 34-17-3w5, and Jewel Oils, Ltd., has a location in LSD 6, same section. Ranger Oil Co. has a location in LSD 4, Section 6-18-2w5, but will drill first on its location in the Turner Valley Field.

A Calgary syndicate, headed by Robert Wilkinson of the Ellis Oil Co., has leased more than 4,000 acres on the DeWinton structure, 2 miles east and a half-mile south of DeWinton station. The structure is a continuation of that on the Sarcee Reserve, being situated mostly in Township 21, Ranges 28 and 29w4, and partly in Township 21-1w5. It is about 18 miles southeast of Calgary. The Calgary syndicate is now arranging for a test. A syndicate of High River men also has holdings on the structure and will drill a test near the Davisburg bridge. Some gas indications have been met in shallow wells in this area, and at the time of the Calgary boom the Federal Oil & Gas Co. put down a test which got a fair gas flow at 2,100 feet.

In the Aldersyde district, Ranchmen's Oil & Gas Co., LSD 16, Section 13-20-29w4, in putting down a test for water for drilling got a shallow gas flow at 200 feet, sufficient to run the boiler in its commercial test. Drilling equipment for the latter is being hauled to location.

Wainwright Field

In the Wainwright Field, Emerald Oils, Ltd., LSD 8, Section 30-45-6w4, is pulling casing preparatory to fishing the lost bit. Western Consolidated's No. 2, Section 30-45-6w4, which is in production has been re-cemented under heavy pressure in the effort to shut off the water. Fabyan Petroleums, LSD 8, Section 24-45-8w4, is at 1,100 feet and drilling. Wainwright Dome Oil Co., LSD 7, Section 31-45-6w4, has a rig up and will probably spud in next week. Art Allison and Pat Adams will handle the drilling. British Wainwright Oils, LSD 13, Section 20-45-6w4, is being boarded for winter work. David Credille will look after the test, which will spud in this month.

Manufacturers Oil & Refining Co., organized recently at Edmonton as a drilling, refining and marketing company, has located No. 1 test in LSD 15, Section 20-45-6w4, close to the proven production. Interior Oil Co., Section 36-44-7w4, is below 1,500 feet, and drilling. The Wainwright Gas Co. has a ditching machine at work, making trench for the pipeline to deliver gas from the Maple Leaf Oil & Gas Co.'s No. 1 gasser, in Section 19-45-8w4, to the town of Wainwright. Pipe and other equipment is reported to have been shipped. A Winnipeg syndicate has secured 2,000 acres of oil leases from the Wainwright Oil Lands Co., and has made a tentative test in LSD 9, Section 25-45-7w4.

Ribstone-Blackfoot

On the Ribstone-Blackfoot anticline, east of the Wainwright Field, Ribstone Oils, Ltd., LSD 1, Section 1-46-1w4, has got through a difficult gravel formation and put down the 20-inch heavy casing, and is now drilling for the 15½-inch which will be carried down as far as possible. Advance Oil Co.'s No. 3, LSD 1, Section 16-45-1w4, after being held up for boiler repairs is at 50 feet and drilling. Imperial Oil, Ltd.'s No. 1 Ribstone, Section 5-45-1w4, is ready to spud in.

In the Lesser Slave Lake district, Northern Alberta International Oils, Inc., of New York, Section 14-74-4w5, is down 900 feet and is starting to make hole for the 10-inch casing.

On the Sinclair structure, south of Calgary, Caledonia Oil Co. of Calgary, has spotted a test in LSD 16, Section 33-17-3w5.

In the southern foothills close to the international boundary Senator Edward Michener of Red Deer, Alta., has in behalf of a New York syndicate, filed on 31,000 acres south of Pincher Creek, in the Twin Butte area. The leases lie in a northwesterly direction from Township 2-29w4, and include Township 4-20w4. The leases were taken up at public auction, having lapsed through the failure of the original holders, the Northwest Co., a drilling subsidiary of Imperial Oil, Ltd., to renew. Imperial Oil, Ltd., some five years ago put down two dry holes on these leases and later abandoned them. The Michener syndicate is now making plans for further development work.

Senator Michener and associates have extensive holdings near Milk River, in the border field, where a test will be drilled this fall. They have also filed on 150,000 acres on the Blood Indian Reserve, west of Lethbridge.

The Calmont Oils, Dallas Oil Co. and Alberta Pacific Consolidated Oil, Ltd., of Calgary, have jointly filed on 7,000 acres in the Milk River district, close to the Alberta-Montana boundary, and adjacent to a test drilled some years ago by Imperial Oil, Ltd., in Section 5-1-16w4. The Imperial Oil, Ltd.'s Red Coulee well got a show of oil but was later abandoned. A joint test will probably be drilled by the three companies this fall.

On the Quarantine Reserve, near Coutts, Urban Oils, Ltd., Section 4-1-15w4, has resumed drilling at 3,042 feet. In the Foremost area, Devenish Petroleums, Ltd., LSD 5, Section 27-5-14w4, is drilling at 700 feet.

Jumping Pound District

In the Jumping Pound district, west of Calgary, Imperial Oil-Bow River No. 1, LSD 15, Section 12-25-5w5, is cementing at 3,700 feet. The wet gas show recently reported at 3,400 feet failed to develop any large production, though it is reported sufficient gas was secured to run the boilers. In this area, the Calmont Oils, Ltd., Dallas Oil Co. and Alberta Pacific Consolidated have secured 5,000 acres some distance west of the Imperial

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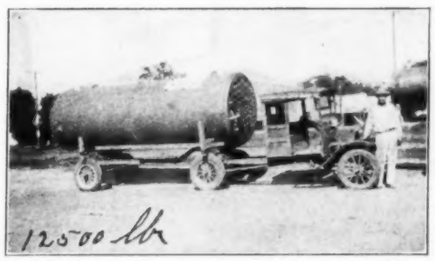

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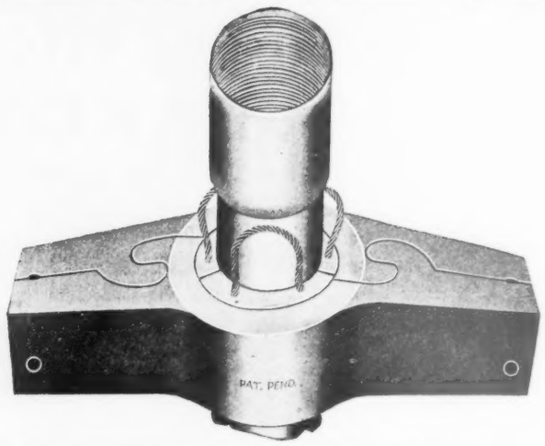

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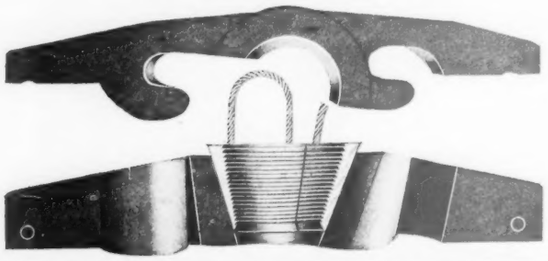

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holdings, and will likely drill a test this fall.

In the Highwood area, Imperial-Highwood No. 1, LSD 3, Section 36-18-3w5, is reported drilling at 260 feet. In the Border areas, Imperial-Burdett No. 1, Section 8-11-11w4, is drilling at 2,350 feet. Imperial-Erickson Coulee No. 1, LSD 18, Section 8-1-12w4, east of Coutts, is at 2,440 feet and drilling.

South and west of Coutts-Sweetgrass, on the Montana side, a further extension of the Montana Field is indicated by a test drilled by C. F. Ewing, H. E. Krebs and J. R. Adams of Sand Point, Idaho, in Section 1-35-5w, about 10 miles north and west of Kevin. This test got a stray sand with fair showings of oil at 2,485 feet, about 100 feet above the Sunburst sand, and is now being deepened to the Sunburst and Ellis horizons.

A group of Winnipeg and Toronto men headed by T. B. Kyle of Winnipeg have spotted a test in Section 11-37-2w, on the Montana side, and have contracted with J. W. Elliott of Kevin to put down the well. In Alberta, the Kyle Syndicate has filed on territory near Verdigris Coulee, where a later test will be put down.

In the Ontario fields, the Dominion Natural Gas Co. is drilling a test for gas in Norfolk County, east of the Courtland Field. In Dawn Township, Lambton County, Union Natural Gas Co.'s No. 12 has finished a dry hole at a depth of 2,236 feet. This is the second dry hole drilled in Dawn Township this year, No. 11 having limited the southeast end of the field and No. 12 the northwest end. In Tilbury East Township, Kent County, Union Natural Gas Co. has located No. 260, as a test of the gas sand. In Dawn Township, Lambton County, Union Natural Gas Co. has located No. 13 at the eastern end of the field.

LOUISIANA-ARKANSAS

(Continued from Page 49)

mented at 1,042 feet at No. 3; a rig is up for No. 4 Crystal fee, 1,320 feet north and 330 feet west center Section 24-21-16, and No. 5 Crystal fee, 1,320 feet west and 990 feet east NE cor. Section 23-21-16, is a derrick. Location was made for Victor Wenzel's No. 2 Hunsicker, 250 feet south and 250 feet west NE cor. SE. Section 15-20-15. Wenzel's No. 1 Wemple, Section 14-20-15, is being bailed to test at 2,265 feet and a derrick is up for No. 2 Wemple, 1,070 feet south and 200 feet east NW cor. Section 15.

Urania Field

All of the completions in the Urania Field last week were on the La Salle Parish side. The best well was Rochelle Oil & Gas Co.'s No. 1 Tremont, Section 30-10-2e, which was finished at 1,527-35 feet making 100 bbls. naturally. In the north end of the field Beckman & Freeman's No. 7-B Urania, Section 7-10-2e, is flowing 75 bbls. from sand at 1,531-35 feet. Natural Gas & Fuel Corp.'s No. 4-M, Section 19-10-2e, is making 20 bbls. of fluid, 50 per cent salt water, on the pump, from sand at 1,486-90 feet. Shreveport Oil Corp.'s No. 1 Pendarvis, Section 26-10-1e, is flowing 50 bbls. from sand at 1,504-06 feet. In the extreme south end of the field Montague Oil Co. is producing No. 3 Zenoria, Section 11-9-1e, with air and the well is making 600 bbls. of fluid, 92 per cent salt water, from sand at 1,501-05 feet.

Catalina Oil Co.'s No. 1 Urania, Section 8-10-2e, is drilling at 1,200 feet. Chal Daniels' No. 1 Urania, Section 2-9-1e, is drilling at 1,325 feet. Hartanzo Oil Co.'s No. 1 Urania, Section 7-10-2e, is drilling at 1,420 feet. H. L. Hunt's No. 4 Griswold, Section 2-8-1e, had sand at 1,501-04 feet and is waiting for a standard rig. Hunt McCurry & Zoder's No. 3 Winberry, Section 7-10-2e, topped the sand at 1,512 feet and casing was cemented at 1,509 feet. Keen & Woolf's No. 1 Griswold, Section 3-9-1e, had sand at 1,505-07 feet and is waiting for a standard rig; No. 2 Griswold had sand at 1,504-08½ feet and is waiting for a pumping rig, and No. 3 Griswold, SW cor. NE SE. Section 3-9-1e, is a rig.

Six-inch casing was cemented at 1,538 feet at Louisiana Oil Corp's No. 35-B Tremont, Section 25-10-1e. A derrick is up for Montague Oil Co.'s No. 4 Zenoria, NW cor. Section 11-9-1e. Six-inch casing was cemented at 1,546 feet at Natural Gas & Fuel Corp.'s No. 5-A Russell, Section 26-10-1e; No. 6-A is drilling at 1,400 feet; six-inch was cemented at 1,485 feet at No. 4 F. Tullos, Section 26-10-1e. Same company's No. 5-M Urania, Section 20-10-2e, blew in making 15,000,000 feet of gas and spraying oil from sand at 1,580-88 feet. Casing was cemented at 1,576 feet and the well is to be killed and a liner set. No. 6-M, same section, is coring at 1,570 feet.

Pima Petroleum Co.'s No. 9-B Urania, Section 7-10-2e, is being rigged. H. O. Rodgers' No. 1 Kenny, Section 7-10-2e, is a derrick. Taylor's No. 5 Urania, Section 19-10-2e, is drilling at 900 feet. George W. Wetherbee's No. 5 Urania, Section 2-9-1e, is being bailed to test at 1,500-02 feet. Wetherbee's No. 1-B Urania, Section 3-9-1e, is drilling at 1,340 feet and No. 2-B Urania, same section, is a derrick. On the Winn Parish side of the field Allen and associates' No. 2 Allen, Section 23-10-1e, has spudded. O. W. Clark's No. 9 Harper, Section 23-10-1e, is drilling at 1,100 feet and 8-inch casing was set at 1,223 feet at No. 10 Harper. A rig is up for Natural Gas & Fuel Corp.'s No. 1-F Urania, NE cor. W half SW SW, Section 23-10-1e.

Monroe District

Only one gas well was completed in the Monroe district last week and it was Ruston Drilling Co.'s No. 1 Mayfield, Section 30-20-4e, which was completed at 2,165 feet making 9,500,000 feet of gas with 950 pounds rock pressure. Eight-inch casing was cemented at 930 feet at Natural Gas Products Co.'s No. 8 Tensas Delta, Section 33-22-4e. Standard Oil Co.'s No. 1 Cooperage, Section 34-21-3e, is being reamed to the bottom at 1,137 feet. United Carbon Co.'s No. 1 Clarke, Section 26-20-5e, is drilling at 2,120 feet. Central company's No. 2 Kerr, Section 12-19-4e, is drilling at 1,240 feet. Gulf company's No. 1 West Virginia, Section 17-17-5e, is drilling in sand at 705 feet. Six-inch was cemented at 2,130 feet at Hatcher & Evans' No. 3 fee, Section 17-19-4e. Ladell and associates' No. 34 fee, Section 6-19-5e, is drilling at 2,080 feet. Six-inch was cemented at 2,138 feet at Maurey Drilling Co.'s No. 4 McErwin, Section 20-19-4e.

Ouachita Natural Gas Co.'s No. 2 D'Arbone, Section 25-19-2e, is shut down at 2,270 feet for orders; No. 7 Allison, Section 37-21-4e, is drilling at 1,130 feet. Palmer Corp.'s No. 4 Cole, 660 feet north and 648 feet east, SW cor. SE. Section 7-19-4e, is a rig. Arkansas Fuel Oil Co.'s No. 1 Reeves, Section 14-20-1e, is drilling in broken lime at 4,433 feet. Gulf company's No. 1 Nelson, Section 5-19-1e, is being delayed by a fishing job at 260 feet. United Carbon Co.'s No. 1 White, 660 feet north and 660 feet west SE cor. Section 32-21-4e, is a derrick.

Webster Parish

Ohio Oil Co.'s deep test in Cotton Valley, No. 1 W. Cox, Section 23-21-10, was junked and abandoned at 5,957 feet. In the Shangaloo district Belchie & Laskey's No. 1 Peckett, Section 30-23-9, was completed at 2,624 to 2,630 feet making 20,000,000 feet of gas. Humble Oil & Refining Co.'s No. 2 R. R. Cox, Section 22-21-10, is drilling anhydrites at 4,210 feet. Magnolia Petroleum Co.'s No. 1 Lewis, Section 25-23-10, is drilling at 500 feet. Magnolia's No. 3 Tiner, Section 21-21-10, is drilling in sand at 2,555 feet with cable tools; No. 3-A Turner, same section, is drilling at 1,220 feet. R. W. Norton's No. 1 Josey & Massey, Section 27-21-10, is waiting for 5⅞-inch casing to set at 4,246 feet. Ohio Oil Co.'s No. 4 C. V. Bank, Section 22-21-10, is drilling at 900 feet. Palmer Corp.'s No. 1 Crichton, Section 30-20-8, is drilling in sandy lime at 2,444 feet. Smitherman & McDonald's No. 1 Oakley, Section 29-23-11, is drilling broken lime at 4,745 feet. Southern Crude Oil Purchasing Co. and Ramsey's No. 1 Munn, Section 1-22-10, cemented the hole from 4,620 feet back to 3,320 feet and is sidetracking.

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Underwriter Brainard Ranch oil and gas leases, 25,000 acres in Hutchinson County. Hutchinson County is the major producing area. New 5-year leases from 20 acres to 160 acres. Bought right, can sell at reasonable price per acre. Write for map and prices. I have handled, as underwriter, over 60,000 acres in the field on which over 80 wells are now drilling or producing. Ed R. Mayer, Amarillo Hotel Bldg., P. O. Box 1186, Amarillo, Tex.

M. ELDER & COMPANY

Dealers in
Leases, Royalties and Productions,
Drilling Contracts, Wildcat Blocks.
Laredo District
HAMILTON HOTEL, LAREDO, TEX.

HAVE SEVERAL pieces of flush and settled production for sale in Oklahoma and Wichita Falls districts. Prices reasonable and terms can be arranged if necessary. P. O. Box 1144, Dallas, Tex.

ROYALTIES—PRODUCTION

FOR SALE—Sumner County, Kansas, royalty 1/32 under drilling well. NW¼ Section 25-T.32-R.1e. Southwest of Miller well Oxford district. Will divide it up, write 304 Orpheum Bldg., Wichita, Kans. Phone Market 3871.

TEXAS PANHANDLE

Royalties in large or small units to suit any size buyer in fastest growing and most rapid developing oil field in middle west. Write for list of offerings. B. O. Taylor, 306 Blackburn Bldg., Amarillo, Tex.

ROYALTIES—Can secure Arkansas royalties on structure in line with production where there is most certain to be much activity in the near future. Get in before the rush. Correspondence invited. Harry Spooner, Stephens, Ark.

FEE OWNER wants to sell ¼-interest, or less, in royalty of 1,182 acres in Shackelford County, Texas; ¾-mile of discovery well. Other wells drilling. No dry holes in vicinity. Need cash. J. A. Kendrick, Albany, Tex.

ROYALTIES—PRODUCTION

WANT TO BUY—Producing royalties. Give description, price, production, depth and age of wells; full details. Address P. O. Box 1359, Tulsa, Okla.

$1,000 WILL BUY one-fourth interest in mineral rights on 200 acres Stephens County, Oklahoma. P. O. Box 806, Duncan, Okla.

WILL BUY royalty or leases for responsible parties or oil companies on small commission.

One trial and you will be our regular client. Have regular lease man and know the game.

FREEMAN OIL CO.
Pauls Valley, Garvin County, Oklahoma.

WANTED—Producing royalties Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

KEVIN-SUNBURST HOLDING CORPORATION
Shelby, Montana

We handle royalties and leases in the best areas in the Kevin-Sunburst Field. Quick action will secure excellent leases with liberal terms. All data on field gladly furnished upon request.

FOR SALE—EQUIPMENT

FOR SALE—Swan Underreamer for 15-inch OD pipe measuring 14¼ inches inside diameter. New, never used. Virginia Machinery & Well Co., 1319 E. Main St., Richmond, Va.

FOR SALE — One Ferguson Water Drill, one Ford truck. 105 South Olympia. Phone 3-4231, Tulsa, Okla.

E M V E E

SIGHT FLOW SEPARATOR

Permits of carrying back pressure on pumping wells, now conceded to be very desirable.

Saves every foot of gas for use on the lease.

Automatically separates oil, gas and water.

Absolutely holds the gravity of the crude.

Reduces amount of B. S. to the minimum.

Eliminates evaporation.

You can see the wells pump.

Positively fool proof.

Sizes 16 bbl., 25, 50, 100 and 130 Bbl.

Send for descriptive matter.

M. & V. TANK COMPANY
Wichita Falls, Texas

FOR SALE

Eight steel storage tanks 8 feet diameter by 40 feet long; located at Little Rock, Ark. Price $575 each f.o.b. cars.

Two No. 12 Sweetland filter presses.
Phone, write or wire.
CONSOLIDATED PRODUCTS COMPANY, Inc.
15 Park Row New York City

FOR SALE—One No. 2 National drilling machine and tools complete. Phone 193, or write Arcade News, Hominy, Okla.

FOR SALE—EQUIPMENT

FOR SALE—Gurley Explorer's Transit, used only few times; perfect condition; with carrying cases and shipping boxes; cost new $236; price only $118. H. H. Hood, Morganfield, Union County, Kentucky.

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3 lines	1.05	1.80	2.55	3.30
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Mail your advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

FOR SALE—First class machine shop, motor driven tools; located in brick building; will lease building. Box B-503, The Oil and Gas Journal, Tulsa, Okla.

27"x16' Bridgeford lathe, $600.
24"x12' Lodge & Shipley lathe, $850.
No. 60 Heald cylinder grinder, $750.
No. 2 Barrett cylinder boring machine, $700.
We carry a complete line of machinery and supplies. Terms can be arranged if desired. Send for list.
Cincinnati Machinery & Supply Co.
219 East Pearl St.,
Cincinnati, Ohio.

USED LINE PIPE FOR SALE
50,000 feet 3-inch
75,000 feet 4-inch
50,000 feet 6-inch
Two miles 60-pound first-quality relaying rails.
For immediate shipment from our Texas yards.
KEYSTONE PIPE & SUPPLY CO.
315 W. T. Waggoner Bldg.
Fort Worth, Texas.

FOR SALE—Refinery equipment. A. F. Williams, El Dorado, Kansas.

FOR SALE—Approximately 4 miles (new) 16" O. D. Dresser type plain end pipe couplings (⅝" metal), special heavy wedge section, Goodrich Gr. 19 rubbers (⅛"x⅝"x1⅜"). Oklahoma Natural Gas Co., Box 2047, Tulsa, Okla. c/o Lundy Woods.

FOR SALE—New improved Miller 50-horsepower, direct-driven vacuum plant; first class condition. A. L. Ritchey, Chautauqua, Kans.

FOR SALE—Eight-inch Bignall & Keeler motor-driven pipe threading machine, complete. Can be seen in operation. We need the room to install larger machine.
CENTRAL PIPE & SUPPLY CO.
2036 Central St., Kansas City, Mo.

FOR SALE
10,000 feet 2"-4-lb. Tubing.
25,000 feet 2" Line Pipe.
30,000 feet 3" Line Pipe.
10,000 feet 6⅝"-24-lb. DBX Casing.
6,500 feet 8¼"-32-lb. DBX Casing.
1,000 feet 10"-40-lb. Casing.
1,000 feet 12½"-50-lb. Casing.
This material is once run and guaranteed as to threads, couplings, etc. Pipe located in Ft. Worth and North Central Texas. Immediate shipment.
DIAMOND PIPE & SUPPLY CO.
Ft. Worth, Texas

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

ALL NEW

The following equipment has never been used and can be purchased at an extraordinary saving:

4—2½x2" Deming Triplex Pumps; belt driven. Figure No. 48.
2—1½" Deming Triplex Pumps; belt driven. Figure No. 48.
7—¾" Hohman Nelson Airless temperature controllers, range 3,500 to 4,500 degrees.
8—½" Low pressure safety valves with iron ball weight.
7—1½" Northrup H.P. Regulating valves.
9—Hohman Nelson right angle thermometers, 9" scale, 2½" stem, 1" union connection, range 40 to 300 degrees.

1—Hohman Nelson Straight thermometer, 9" scale, 2½" stem, 1" Union connection, range 40 to 540 degrees.

15—Sets common round body wood wheel water gauges with guards.

22—Sets automatic round body wood wheel water gauges with guards.

95—3" Excel ground joint unions.

70—3" C. I. return bends, open pattern.

300—2"C. I. return bends, open pattern.

9—2"—Look boxes.

NATIONAL VALVE & MFG. CO.
3101 Liberty Avenue,
Pittsburgh, Pa.

WANTED

DRILLING BLOCKS WANTED—If you have acreage in west Texas, and especially in the so-called shallow area, which you are willling to give for a test well, get in touch with me, giving location, amount of acreage and any other desirable data. W. T. Earnest, 4803 Swiss Avenue, Dallas, Tex.

WANTED—Financial assistance by driller with tools; fine block of acreage in Texas Oil Field. Have been drilling 25 years. Drilled 36 wells on one lease without a dry hole or fishing job. Address, 805 West Hubbard St., Mineral Wells, Tex.

WANTED—By responsible drilling corporation, blocks to drill, part money and part interest; have tools and equipment for any depths; not interested out of Texas. Address, P. O. Box 61, Fort Worth, Tex.

IMMENSE PROFITS possible from $100. Opportunity worthy of confidence. Investigate. Robert Berney, Westbrook Hotel, Fort Worth, Tex.

WANTED CAPITAL to operate gold, silver, lead property. J. E. Cooper, Cripple Creek, Colo.

IF YOU want a drilling contract in the Amarillo, Texas, oil field see me. If you have acreage for development I can also put you in touch with the driller. W. L. George, 307 E. 6th St., Amarillo, Texas.

WANTED—Party who has money to finance drilling one test on ten thousand acres under lease in Franklin County, Texas. Also have several large blocks will give for test. No monkey business if interested write Box 466, Winnsboro, Texas.

FOR SALE—DOGS

FOX TERRIERS—Wire-haired, pedigreed; age 4 months; priced reasonably. Dr. R. S. Montgomery, Taylorville, Ill.

FOR SALE—Fine Boston Terrier Puppies. Pedigreed Tight screw tails, white collars, etc. Mrs. H. M. Hills, Lamoni, Ia.

HUNDRED Hunting Hounds cheap. Supplies. Catalogue. Kaskaskennels, Herrick, Ill.

POSITION WANTED

EXPORT MANAGER

University graduate; chemistry; linguist; several years' experience exporting; widely traveled; seeks permanent connection with responsible concern. First-class references. Employed at present. Box B-497, The Oil and Gas Journal, Tulsa, Okla.

EXECUTIVE ACCOUNTANT

Wants position with a substantial oil company. Thorough practical experience in petroleum refinery operating and construction costs, general accounting and management problems. Competent to organize and systematize all administration departments. Qualified to handle position as comptroller auditor, assistant to managing executive or similar capacity. Will consider moderate salary; now located in Tulsa. Box B-502, The Oil and Gas Journal, Tulsa, Okla.

CAPABLE MAN having dealt heavily with practically every major producing company in the Mid-Continent, Texas and Louisiana fields, desires new connection with a recognized leader. Pipe, big storage, derricks or tank cars preferred. Successful organizer, distributor and handler of credits. Want protection, assistance and large possibility. Willing to demonstrate and Furnish AAAA-1 references. Box B-501, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED with reliable oil company. Sixteen years' experience, office, purchasing, warehouse and executive, with company operating in United States and Mexico; 34 years old, married; references. Address Box B-482, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED oil man wants job as production man or scout for good company; over 15 years' experience; good references. Box 238, Gorman, Tex.

THOROUGHLY EXPERIENCED refinery man desires communication with anyone needing such a man. Box B-464, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

WANTED SALESMAN or broker to sell oil stock on commission. Box 32, Mexia, Tex.

STEAM SPECIALTY SALESMAN

Wanted to represent us in open territory. Good commissions.

FRANCE PACKING CO.
6510 Tacony St., Philadelphia, Pa.

RANCHES—FARM LANDS

$3.50 PER ACRE, 10,000-ACRE RANCH WILL MAKE SPLENDID GAME PRESERVE

Good hunting and fishing. On Eleven Points River; 300 acres cultivated. Four sets buildings; heavy fence. Fine range. One-day shipment to St. Louis.
J. RICHARD BROOKS
Alton, Mo.

FOR SALE—Large Mississippi delta plantation as a walkout, $35 an acre; no trade. This year's crop will net $100,000. W. T. Pitts, the Land Man, Indianola, Miss.

REAL ESTATE

FIRST-CLASS HOTEL for sale in Blackwell, doing big business; reason for selling, going to Texas or Florida. Will stand closest investigation. Address Box 30, Blackwell, Okla.

FOR SALE—MAPS

SOUTHEASTERN NEW MEXICO MAPS

Geological, Ownership and Sectional.
Write for folder.
M. H. HUNTER CO.
Roswell, N. Mex.

OIL DEVELOPMENT county maps. any county in Oklahoma or Panhandle of Texas, 50 cents each. Lindsay Map Co. Scott Thompson Bldg., Oklahoma City, Okla.

INCORPORATIONS

DELAWARE incorporators. Charters fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

PATENT ATTORNEYS

REGISTERED PATENT ATTORNEYS
United States and Canada

Before disclosing your invention to anyone send for blank form.
Evidence of Conception
Bulletin "How to Establish Your Rights" and complete information free.
LANCASTER & ALLWINE
240 Ouray Bldg., Washington, D. C.

PATENT-SENSE — Valuable book (free) for inventors seeking largest deserved profits. References include prominent oil men. Write Lacey & Lacey, 718 F. St., Washington, D. C. Established 1869.

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
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7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

MAIL LISTS

RAISE money by selling stock to prosperous people. Guaranteed mailing lists of all classes. Write Results Advertising Co., 709 Pine St., St. Louis, Mo.

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Leases, assignments, releases, township books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

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We are prepared to furnish from stock standard forms of gas meter Consumers' Ledgers. Sample forms and quotations on request. First-class material and workmanship.
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Screw machine products, sucker-rod fittings, swivels, pumps, etc. Heat treating. Contract Manufacturing. Send B/P or samples for quotations. Accurate work, prompt delivery.
TURNER-WARNER SCREW CO.
1226-34 Lydia Ave.,
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CRAGO CUT GEARS

Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

MONEY RAISING

DEPENDABLE FINANCING SERVICE

Results sure, swift, economical. Employ the One Great Plan—the plan that gets money. Avoid abortive "mail order" and "phony" broker schemes. Describe proposition. Hansel Financing Specialists, 212-GE Earlham St., Pittsburgh, Pa.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 117 E. 10th, Oklahoma City, Okla.

BUSINESS OPPORTUNITY

HAVE a New York address, mailing privileges, $5; private office, desk room. Write H. M. Coudrey, 623 Knickerbocker Bldg., New York, N. Y.

BUSINESS OPPORTUNITY

FOR SALE—Steel map case, good as new. Cost $800, will sell for $300. Drawing furnished on application. Write Basil Turner, Ponca City, Okla.

WILL FURNISH 1 to 10,000 acres for a well 3,500-foot or production. Located in southwest Texas and in line with development. Five Thousand ($5,000) dollars must be deposited as a guarantee and will be released as fast as contract is complied with. References furnished and required. Complete information can be had from, W. E. Foreman, Box 644, Sonora, Tex.

PANHANDLE information. Prompt, accurate and reliable. Confidential reports on local stocks, leases and royalties. Drilling activities of the entire Panhandle, $1. Our big 31-county maps are posted up to date showing locations of the wildcats; while they last $1. Better Business Ass'n., 208½ Taylor St., Amarillo, Tex.

CALIFORNIA OPERATOR — I have the structures for California party wanting to operate in Texas. Write or wire. E. H. White, 521 West Jefferson Ave., Dallas, Tex.

WANTED—Party with money to join in developing 640-acre lease with good geology and one well now producing plenty of gas to develop lease; only 1 foot in sand with good showing of oil at less than 500 feet. Need small amount of capital to complete development. Address, 511 Dan Waggoner Bldg., Fort Worth, Tex.

CAPITAL — An experienced, dependable broker with following will give personal attention to financing of worthwhile proposition. B. W., 810 Broad St., Newark, N. J.

WILDCATTERS ATTENTION — In exchange for a test well we have 8,000 acres leased for oil and gas at Cumberland, Wis., good structure; on the flanks of a volcanic uplift; gas seepages. Wisconsin is the coming oil state, get in on the ground floor. M. W. Zimmerman, Cumberland, Wis.

HAVE 2,000 acres in solid block, 12 miles southeast of Mexia, Limestone County, Texas, for drilling contract. T. O. Lofland, Richland, Tex.

PATENTED OIL SHALE LANDS

For Sale — We have large block patented oil shale land located on railroad and water; good location, good shale and good price. Winchester & Modesitt, Steel Bldg., Denver, Colo.

TREMENDOUS PROFITS

On small investments; 100 to 1,000 per cent advances have been made in Nevada mining stock the last few months; we are on the verge of a big mining boom; write for free information. The Wilson Foxworthy Co., Reno, Nev.

CHICAGO-CALUMET DISTRICT

Factory sites on water and belt line railroad connecting with all Chicago roads, and all pipe lines, good labor market. Will assist in financing, brokers protected. Our services free, free map and details.

THE CALUMET WORLD

Promotion Dept., 105 West Monroe St., Chicago, Illinois.

INVESTMENT OPPORTUNITY

Full particulars furnished regarding investment of $100 to $500 in 40-acre oil and gas lease. Now producing, with present production assuring substantial income on investment, with possibilities for very large profits from further development. References furnished. S. L. Motter, 314 Holmes Bldg., Ft. Worth, Texas.

I HAVE several good drilling blocks in Kay and Grant Counties, Okla. Also New Mexico state leases cheap. Call, wire or write. Wm. C. Uphoff, Hotel Melba, Blackwell, Okla.

XUM

EASTERN MARKET CONTINUES FIRM; CUT IMPROBABLE; TALK OF ADVANCE

By N. O. Fanning

NEW YORK, Sept. 20.—Firmness continued in the eastern refined oil markets during the past week. Gasoline consumption was unusually favorable due to good weather. Price cutting at service stations was reported as more prevalent upstate New York and in parts of New England. However, there does not seem to be any immediate danger of a general cut in the tankwagon market. The situation generally appears to be well in hand.

Oil companies believe that if the price structure can be maintained two or three more weeks, there will be no cut in prices this year. Rather, there may be an advance in quotations before January 1. Especially is this probable if there are no new fields developed before cold weather sets in. The crude situation is looked upon as encouraging by leading refiners here.

Kerosene Firm

A bigger demand for kerosene has set in here. Furnace oil is moving rapidly at 11½ to 12 cents a gallon. This is the big month for oil burner installation, and arrangements for fuel go with this operation. Water white kerosene is firm at 10 cents a gallon, and demand is steadily improving.

Gas and Fuel Oil

The gas oil market continues firm, but the expected advance in price has failed to materialize. This is also true of fuel oil. The trade looks upon it as an indication that oil companies are not in a hurry to raise prices, awaiting until such a step is absolutely necessary. They realize that higher prices will be likely to restrict consumption, especially of Diesel oil and bunker fuel oil. Coal is more plentiful now, and the shipping industry is not in the mood to accept price advances in fuel oil. It has been a long time since the shippers have enjoyed real prosperity.

Lubricating Oils

A strong demand for cylinder oils is reported. Red and pale paraffin oils are dull. Spindle oils are steadily improving. No changes in prices of any lubs were reported during the week.

Paraffin Wax

The wax market is firm, with prices unchanged. Higher melting points are in exceptionally good demand.

Petrolatum

The market for petroleum continues firm. Snow white and lily white are moving on a broader scale than the other grades. Prices generally are unchanged.

Export Market

The oil export market here was characterized by increased inquiries for kerosene, gas oil and fuel oil from European sources. Lubricating oil was also in demand.

Exporters here have witnessed this year a general broadening in export demand, especially with respect to South America and the Far East. The result is a small demand now for products in bulk, instead of in cases and barrels entirely. This bulk demand is expected to grow steadily.

There has been a small decline, perhaps seasonal, in the demand for lubricants and wax in Europe, but an increase in South America, Africa and the Far East. Germany alone among European nations is taking more lubricating oils and greases from this port than usual.

An recent export cargo consisted of approximately 900,000 gallons of lubricating oil in bulk to Brazil, the first tanker shipment to South America from New York in many months.

Another cargo, to England, consisted of 1,456,592 gallons of lubricating oil, 234,809 gallons of kerosene and 119,342 gallons of liquid asphalt.

The following table shows principal exports of petroleum and petroleum products from New York reported during the last three weeks (figures in gallons unless otherwise noted):

	Week Ended		
Gasoline:	Sept. 15	Sept. 8	Sept. 1
Bulk	.....	2,095,463	676,200
Barrels	201,700	135,500	.....
Cases	1,59,090	787,500	846,900
Kerosene:			
Bulk	234,809	1,626,108	201,600
Cases	1,747,240	913,660	869,150
Gas oil:			
Bulk	.....	.....	756,500
Fuel oil:			
Bulk	.....	250,865	.....
Lubricating oil:			
Bulk	1,456,592	886,413	65,000
Barrels	730,250	1,043,050	1,123,050
Cases	116,280	229,150	116,950
Lubricating grease:			
Barrels (lbs.)	444,125	625,500	1,424,250
Paraffin wax:			
Bags (lbs.)	496,100	222,200	1,527,240
Barrels (lbs.)	311,600	.....	426,075
Petroleum asphalt:			
Bulk	119,342	.....	.....
Barrels (lbs.)	1,304,825	972,925	10,768,725
Petroleum coke:			
Bags (lbs.)	.....	1,100,000	.....

The foregoing figures include shipments of 500 bbls., 1,000 cases or over.

Tanker Charters

Recent fixtures include:

Tanker Hagan (Am.), 3,934 tons net, Gulf to north of Hatteras, 27 cents, September October loading.

Tanker Sun (Am.), 50,000 bbls. kerosene, Gulf to north of Hatteras, 32 cents, October loading.

Tanker Georgia (Am.), 3,746 tons net, Gulf to north of Hatteras, 26 cents, September loading.

Tanker Tamiahua (Am.), 8,155 tons net, Gulf to north of Hatteras, 130,000 bbls. crude, October loading.

Tanker Valetta (Nor.), 2,997 tons net, clean oil, Gulf to French Atlantic, 27s. 6d., one, 28s. 6d. two ports, October loading.

Tanker Phoenix (Am.), 3,511 tons net, California to north of Hatteras, clean, 80 cents, October loading.

Tanker Occidental (Am.), 4,053 tons net, Gulf to Philadelphia, 26½ cents, early October loading.

Tanker Dixiano (Am.), 2,613 tons net, Gulf to north of Hatteras, 26 cents, September loading.

Tanker Daghestan (Br.), 3,532 tons net, kerosene, Gulf to United Kingdom, 26s. 6d., September-October loading.

Tanker Neptune (Ger.), 3,640 tons net, Gulf to Copenhagen, gas oil, 25s., September-October loading.

Oil Receipts

Estimated daily average receipts of crude and refined oil at Atlantic ports during the week ended September 15 were 3,267,000 bbls., a daily average of 466,000 bbls. Of the total, Gulf Coast contributed 2,235,000 bbls., or 319,000 bbls. daily; Pacific Coast, 672,000, or 96,000 bbls. daily; Mexico, 286,000 bbls., or 41,000 a day, and South America one shipment of 74,000 bbls., a daily average of 10,000.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended		
Source:	Sept. 15	Sept. 8	Sept. 1
Gulf Coast	319,000	374,000	235,000
Pacific Coast	96,000	124,000	45,000
Mexico	41,000	67,000	102,000
South America	10,000	94,000	42,000
Total	466,000	659,000	424,000

Daily Averages by Months

	Gulf	Pacific	Mexico	So.A.	Total
1926:					
Aug	320,000	61,000	71,000	46,000	498,000
July	360,000	66,000	115,000	36,000	577,000
June	396,000	104,000	117,000	18,000	635,000
May	318,000	66,000	114,000	25,000	523,000
April	326,000	92,000	126,000	20,000	564,000
March	317,000	97,000	152,000	26,000	592,000
Feb.	332,000	73,000	104,000	18,000	527,000
Jan.	279,000	59,000	65,000	31,000	434,000
1925:					
Dec.	298,000	56,000	90,000	13,000	457,000
Nov.	259,000	36,000	80,000	12,000	387,000
Oct.	249,000	36,000	80,000	22,000	387,000
Sept.	306,000	66,000	66,000	10,000	448,000

The foregoing estimates are based on the carrying capacity of incoming oil-laden tankers.

LOUISIANA WILDCATS

(Continued from Page 46)

McClintock & Goodka's No. 1 Olga, Section 35-13-5, tested salt water at 2,518 feet and 4½-inch casing is being fished for at 2,530 feet.

Hempstead County

Frank S. Myers' No. 2 Nichols, Section 17-11-25w, is drilling at 2,260 feet.

Jefferson County

Decem Oil Co.'s No. 1 Hinsley, Section 7-3-10, is being washed to the bottom at 2,530 feet.

Lafayette County

Arkansas Fuel Oil Co.'s No. 5 Allen, Section 18-19-24, is drilling at 1,000 feet. Kensaw Petroleum Co. is to make another test of No. 2 Red River, Section 3-20-24, and 4½-inch casing was recemented at 2,810 feet. Total depth of the hole is 2,840 feet.

Little River County

Greason and associates' No. 1 Waldrop, Section 4-13-31, is drilling at 1,510 feet. Mellick Oil Co.'s No. 1 Hawkins, Section 10-11-31, is drilling at 1,885 feet.

Miller County

Gulf Refining Co. is arranging to abandon No. 1 Dorsey, Section 27-17-26, at 2,978 feet.

LOUISIANA

Bienville Parish

Woodley & Collins' No. 1 Thomas, Section 23-16-10, is coring rock at 1,964 feet.

Bossier Parish

Six-inch casing is being set at 2,660 feet at Doern and associates' No. 1 Bollinger, Section 9-22-11, but will not be cemented. The total depth of the hole is 2,684 feet. Tubbs and associates' No. 1 Jacobs, Section 26-20-13, is being rigged. Location has been made for Woodley & Collins' No. 1 Roberson, 330 feet north and west SE cor. SE NW, Section 22-23-12.

Caldwell Parish

Two tests in Caldwell Parish were marked down as failures last week. Grant & Pipes' No. 1 Cruse, Section 6-11-4e, in the Chickasaw Bayou district, was dry and abandoned at 2,000 feet. Keisker & Simon's No. 1 Merideth, Section 38-13-4e, was dry and abandoned at 2,022 feet. T. K. Robbins' No. 1 Beasley, Section 10-11-4e, has been temporarily abandoned at 1,020 feet. Roxana Petroleum Corp. staked location for No. 1 Louisiana Central, NW cor. SW SE, Section 22-12-3e.

Claiborne Parish

Gilliland Oil Co. and Ramsey's No. 1-D Taylor, Section 14-23-8, in the Hayesville Field, was drilled down to 4,548 feet. When the 35 feet of broken formation was bailed the bailer couldn't be got lower than 2,500 feet from the top. The hole is standing with considerable salt water and a little show of oil. George T. Shaw & Ruch's No. 1 King, Section 20-21-8, is drilling at 2,000 feet. Triangle Drilling Co.'s No. 1 Keen, Section 7-19-5, is shut down at 4,602 feet for fuel.

DeSoto Parish

Three wildcat gas wells, one making a little oil and completed some weeks ago, were officially completed during the week. J. C. Walton's No. 1 Chaffraix, Section 36-12-11, 3,000,000 feet at 2,780 feet. J. P. Evans' No. 1 Louisiana Land & Development Co., Section 15-12-14, 1,500,000 feet at 3,050 feet, and No. 1

HEAVY RAINS REFLECTED IN SLOW MARKETS IN CHICAGO TERRITORY

By J. B. Waldo

CHICAGO, Sept. 18.—Rains have been the rule over the greater part of the territory during the entire week. It has in fact rained the greater part of the time since the Saturday previous to Labor Day. The trade looked forward to a good September and the first three days were exceptionally fine. The present conditions only bear out the fact that the gasoline market is very greatly affected by the weather and the further fact that the weather man has not been kind to the oil industry this season.

The demand for gasoline has been light all the week. With distribution so reduced in the territory there has been little consumption compared with normal and little need of supplies by the jobbers. Many of them report that they have cars in transit for which they have no immediate need so that the actual demand has been restricted for the greater part to those jobbers located in towns and cities and where there are considerable stretches of hard road. Most of these orders were for single or a small number of cars and for immediate delivery. They may have been desired to replace orders from the group which were slow in arriving. The refiners with plants in the Central States were most favored with this business.

So far the market has not shown more than a slight decline. A week ago the market here was a flat 11 cents for U. S. Motor gasoline, today it is 10¾ to 11 cents, with a few still holding to the 11¼ cents, but they admit that this is a nominal price. Large buyers report that the 10¾ cents is at present the bottom price. The higher gravities are unchanged.

Kerosene Demand Slight

The demand for kerosene is light right now partly because of flooded conditions and partly because the trade is fairly well supplied. The offerings are more free. The present outlook is that the bulk of the farm work this fall will be done by horses rather than by tractors and the consumption of kerosene will be reduced by soft ground over a large part of the territory. There is little change noted in the market in other respects. The general asking price for 41-43 kerosene is now 9 cents. Until late in the week, there were several refiners who held their price to 9¼ cents but as they caught up with their orders and had the oil to ship they generally reduced their quotation to 9 cents and as yet there has been no cutting below this price or at most very little and this quietly done.

Distillates have moved slowly but the demand is still active and the reason for the lack of business is in part general conditions and in part the high prices asked. Most larger distributors have some distillate in stock and more contracted for and this was bought at prices less than those at which it can be replaced at present. So many of them while keeping tab on the market are waiting for the refiners to reduce their views as to the value of their product. The refiners here at least claim that their stocks of distillate of any grade or kind are much less than a year ago and that if there has been the increase in the number of burners installed that is claimed, there is almost a certainty that the supply will be short if the winter is at all severe. Prices for 38-40 distillate range from 5½ to 6 cents.

Gas Oil Freely Offered

Gas oil is a little more freely offered and for longer periods but the price is not substantially lower in a general way, although in some cases refiners have made slight concessions. In one case a refiner who had held for 4¼ cents intimated that he might accept a bid of 4⅛ cents. There is a general expectation among buyers that there will be less active operation of the cracking stills and that gas oil will be more plentiful but if the demand for the antiknock or cracked gasoline continues to be as active as it is this may not prove to be the case.

Fuel oil is easier in tone, although not materially lower in price. The easing of the market is shown more in the larger offerings and the longer period for which refiners are willing to contract ahead. Some refiners have made quotations over six months or the season at their recent prices for 30 or 60 days. Some refiners that have been out of the market are now offering fuel oil and in some cases seeking business. This may be a temporary condition due to the flooding of many plants and districts.

Sutherlin, Section 20-12-14, 1,500,000 feet of gas and 5 bbls. of oil at 2,950 feet. Graize & Hintze's No. 1 Riggs, Section 27-14-13, is drilling at 1,142 feet. Dixie Oil Co.'s No. 1 Jenkins, Section 9-12-11, is drilling in broken lime and shale at 4,790 feet. Magnolia Petroleum Co.'s No. 1 Bond, Section 27-12-11, is drilling hard lime at 4,061 feet. Snapp and associates' No. 1 Flores, Section 27-11-11, had sand at 2,700 feet and 6-inch is being set at 2,690 feet. A derrick pattern is on location for The Texas Company's No. 11-A Wemple, 1,170 feet south and 902 feet west NE cor. Section 2-12-12.

Franklin Parish

Location was staked for R. W. Williams and associates' No. 1 Elbardt & Lemon, NE cor. Section 17-14-8e.

East Carroll Parish

T. A. Snell's No. 1 Abston, Crump & Wynn Co., Section 24-19-12e, cored white salt water sand at 1,750 feet and was dry and abandoned at 1,789 feet.

Grant Parish

The Texas Company's No. 1 Swope, Section 16-9-1e, was finally put on the production list when the well was completed in sand at 1,573-89 feet pumping 50 bbls. of fluid, 4 per cent salt water. E. H. Billeand's No. 1 Ball, SE cor. Section 19-7-1e, is a derrick. Gulf company's No. 2 Swope, Section 17-9-1e, had sand at 1,596-99 feet and the casing stuck at 1,309 feet while being run to the top of the sand. H. L. Hunt's No. 1 Mathews, Section 15-9-1e, had oil sand at 1,550-54 feet and salt water sand from 1,554 to 1,557 feet. The hole is being plugged back to cut off the salt water encroachment. J. J. Long and associates' No. 1 Calhoun, Section 4-7-4w, is shut down at 1,285 feet. Tunica Petroleum Co.'s No. 8 L. & A., Section 11-8-2w, is drilling at 250 feet.

Jackson Parish

Louisiana Petroleum Co.'s No. 1 Davis Theus, Section 20-16-3w, was dry and abandoned at 2,550 feet. Charles A. Ferguson's No. 1 Martin, Section 5-15-1e, is being cored at 2,515 feet. El Dorado Chief Oil Co.'s No. 1 Jones, Section 3-14-4w, is drilling at 1,400 feet. Grigsby & Co.'s No. 1 Adams, Section 22-17-4w, is drilling gumbo at 1,795 feet. Raymond and associates' No. 1 Davis Lumber Co., Section 13-16-2e, is a rig.

Lincoln Parish

Arkansas Fuel Oil Co.'s No. 1 Lincoln, Section 3-18-3w, is drilling hard shale at 3,170 feet. Buckley & Palmer's No. 1 Davis, Section 12-20-3w, is drilling sandy lime at 2,520 feet.

Natchitoches Parish

Brothers and associates' No. 1 Cockfield, Section 78-7-5w, cored green sand at 1,702 feet. Edwin Forrest's No. 2 Avers, Section 3-13-7, is drilling at 1,895 feet. J. B. Greer's No. 1 L. L. L. L. Co., Section 6-5-7w, is drilling at 2,700 feet. Gulf company's No. 1-A L. L. L. L. Co., NE cor. Section 39-7-7, is a rig. McCormick and associates' No. 1 Russell, Section 41-10-7, is drilling at 1,400 feet. Ohio Oil Co.'s No. 1 L. L. L. L. Co., Section 20-8-8w, is drilling in sandy shale at 1,765 feet. E. Self's No. 1 Fisher, Section 18-8-9w, is drilling packed sand at 1,029 feet. Weaver Brothers Lumber Co.'s No. 1 fee, Section 4-7-7, is drilling sandy shale at 2,000 feet.

Rapides Parish

Hince & Macke's No. 1 Barrow, Section 29-5-2e, is drilling at 2,215 feet. Love and associates' No. 1 Voda, Section 12-4-1e, formerly F. Pacholik's No. 1, is shut down at 1,180 feet, corrected depth, for rig repairs. Seip and associates' No. Ball, Section 41-4n-2w, is drilling at 1,790 feet.

Red River Parish

Magnolia Petroleum Co. staked location for No. 36 Polly, 920 feet north and 100 feet west, center Section 7-12-10.

Richland Parish

Gulf company's No. 1 England, Section 32-17-6e, is drilling at 67 feet. Gulf company's No. 1 Ches-Wyman, Section 23-18-8e, is drilling rock at 2,278 feet. Louisiana Petroleum Co.'s No. 1 Hicks, Section 22-17-6e, is drilling rock at 1,426 feet. Roxana Petroleum Corp.'s No. 1 Tensas Delta, Section 3-14n-5e, is drilling hard sand at 1,149 feet.

Arrangements are being made to core at 4,070 feet at L. M. Emlet's No. 5 Bowman, Section 9-7-12. Magnolia Petroleum Co.'s No. 1 L. L. L. L. Co., Section 11-6-11, is drilling sandy shale at 1,470 feet.

Winn Parish

Allen Drilling Co.'s No. 1 Sanders, Section 21-13-2w, is drilling at 938 feet. Humble Oil & Refining Co.'s No. 1-A C. Edenborn, Section 26-9-3w, is drilling rock at 2,110 feet. Ohio Oil Co.'s No. 2 Edenborn, Section 4-12-1w, is drilling sandy lime at 2,322 feet.

LaSalle Parish

Tunica Petroleum Co.'s No. 11-A L. & A., Section 26-9-3e, is drilling at 2,205 feet. A rig is up for Tunica Petroleum Co.'s No. 12-A L. & A., 300 feet north and east center Section 17-7-3e.

DEEP PRODUCER OPENS MORE POSSIBILITIES

(Continued from Page 54)

the Hebert land on which there is space for 32 tanks. Steel for three more tanks of 55,000 bbls. capacity has arrived for the Yount Lee Oil Co. from the plant of the Petroleum Iron Works, Sharon, Pa.

The Atlantic Oil Producing Co. is deepening No. 1 McLean. No. 8 McLean is drilling around 3,250 feet and No. 9 at 2,785 feet with No. 10 rigging to start. Locations have been made for Nos. 11, 12, 13 and 14. The Rio Bravo Oil Co.'s No. 52 T. and N. O. between Nos. 1 and 4, is drilling at 2,235 feet. No. 51 is located between 2 and 3. The derrick over No. 7, which was destroyed by fire, is being rebuilt. Locations have been made for Nos. 8 and 9.

Deepening Well

The Sun Oil Co. is deepening No. 1 McLean and drilling No. 3 below 3,600 feet. The screen is being pulled from No. 4 McLean. Nos. 5 and 6 are locations. No. 7 is drilling around 2,765 feet. No. 1 Price is below 3,086 feet. The Magnolia Petroleum Co.'s No. 1 fee on its tank farm, south of production, is drilling at 2,835 feet. The Yount Lee Oil Co. is drilling Nos. 8 and 9 fee, 11 and 12 McFaddin and 10-B Gladys.

The Gulf Production Co.'s No. 2 Jack-Duff, on the south end of the pool, is drilling at 3,435 feet. No. 3 is around 3,254 feet and No. 4 at 2,760 feet, with a location for No. 5. On the Roche lease No. 4 cemented casing at 2,490 feet. No. 5 is drilling below 1,544 feet. No. 5 Oakwood is drilling around 2,355 feet, with a location for No. 6. Locations have been made for Nos. 6-A, 7 and 8 Weed.

Other tests drilling include: Ross Combest's No. 1 Ewing, pulling strainer to drill deeper from 3,450 feet. It bailed salt water last week. The Deep Sand Oil Co.'s No. 1 Howell is idle at 3,490 feet, with No. 3 drilling at 1,235 feet. The Favorite Oil Co.'s No. 1 Weed is idle at 4,260 feet. It is west of the group of wells. The Walker Oil Co.'s No. 1 Quinn is drilling around 3,655 feet, with a location for No. 2 Quinn. W. C. Turnbow has a location for No. 2 Banks The Grayburg Oil Co.'s No. 1 McLean, out along the Hildebrant Bayou road on the west end of the extension, is drilling around 3,345 feet. W. B. Flynn's No. 1 Gladys is at 3,870 feet. Paggi & Co. will drill No. 3 Gordon deeper from 3,275 feet. The Kinnear Oil Co. has a derrick up for No. 1 Gladys and Seiss and others a location for No. 1 Pierce. The Unity Oil Co.'s No. 90 McFaddin is rigging to start drilling.

Wells drilling in the pool at the end of the week total 25, with 4 rigging to start and 16 locations made. At the beginning of the month 40 wells were drilling with 21 rigs and locations. These figures indicate the limited acreage is pretty well drilled up and the future of the pool depends upon an extension by the Magnolia Petroleum Co. to the south and absence of salt water in the new lower strata found by the Gulf company this week.

The Yount Lee Oil Co. has a big block of partially proven acreage on the southeast side of the old pool on which practically no work has been done for 60 days. The company has all the available acreage and will not be hampered with offsets.

KANSAS FIELDS

(Continued from Page 44)

made 112 bbls. after a shot of 40 quarts in sand at 2,706-23 feet. The rig is on the ground for No. 3 Worrell, SW cor. NW SE, Section 12-27-7. White Eagle Oil Co. and others' No. 2, SW SE SW, Section 12-27-7, had sand at 2,641-92 feet and was shot with 120 quarts and made 480 bbls. of oil and 22 bbls. of water. No. 3, NE cor. SE SW, Section 12-27-7, made 200 bbls. after a shot of 100 quarts in sand at 2,634-71 feet. Phillips Petroleum Co.'s No. 2, NW cor. NE NW, Section 13-27-7, had sand at 2,645-69 feet and made 500 bbls. on the swab after a shot of 100 quarts. Mid-Kansas Oil & Gas Co. has spudded No. 3, SE cor. NW NW, Section 23-27-7.

Tidal Oil Co.'s No. 35, SE cor. SW SW, Section 16-26-8, had sand at 2,503-36 feet and made 35 bbls. after a shot of 80 quarts. The rig is on the ground for No. 36 Dickenship, CNL NW, Section 21-26-8. Tom Johnson's No. 2, NW cor. NE SW, Section 3-28-6, had sand at 3,047-54 feet and made 437 bbls. Prairie Oil & Gas Co. has the rig up for No. 1 Hotchkiss, NW cor. SW SE, Section 35-29-6.

Rice County

Phillips Petroleum Co. has a dry hole at 3,525 feet in No. 1, NW cor. SE, Section 2-21-6w.

Kingman County

Port Fleeger and the White Eagle Oil Co.'s No. 2, NW cor. NE, Section 34-27-7w, is dry and abandoned at 4,008 feet.

Sumner County

Meridian Petroleum Co.'s No. 1, C SE Section 15-30-2w, is dry and abandoned at 2,185 feet. Roxana Petroleum Corp.'s No. 1, SW cor. NE, Section 25-31-2, is making 790 bbls. after a shot of 40 quarts in sand at 1,847-84 feet. Indian Territory Illuminating Oil Co.'s No. 1, SW cor. NE, Section 17-32-2, had the Wilcox sand at 3,644-74 feet and made 120 bbls. the first 12 hours.

ARTESIA, NEW MEXICO

(Continued from Page 49)

Section 3-18-27, shut down; Cook Ironside's No. 1, Section 10-20-29, shut down; Decum Development Co.'s No. 1 Vandagriff permit, Section 5-17-28, cleaning out after shot. Empire Oil & Gas Co.'s No. 2 location, Section 2-18-27, offsetting No. 1 producer to south; Flynn-Welch & Yates No. 49, Section 3-18-28, drilling below 1,800 feet; No. 3 Dunn permit, Section 10-18-28, drilling below 1,900 feet. Hamilton Petroleum Co.'s No. 1 Billings, Section 12-19-26, testing oil sand at 1,140 feet; Hasenfuss & Donley's No. 2, Section 13-18-28, fishing job top of oil sand at 2,646 feet; Henderson-Dexter-Blair's Section 9-19-28, drilling below 2,110 feet; Levers-Carper's No. 4, Section 3-18-28, drilling below 1,800 feet; Merriwether et al's No. 1 Goodale, Section 19-18-29, fishing 2,450 feet; Navajo Oil Co.'s No. 2, Section 28-18-28, drilling below 700 feet. Ohio Oil Co.'s No. 7 Toomie-Allen, Section 28-18-28, drilling below 900 feet; Phillips & Welch's No. 1, Section 35-17-28, cleaning out after shot; Phillips & Welch's No. 1, Section 18-18-28, drilling below 600 feet. Pueblo Oil Co.'s No. 1, Section 33-17-28, drilling below 1,830 feet; Rehn et al's No. 1 Winans, Section 15 18-26, drilling below 2,110 feet; Snowden-McSweeney & McNutt's No. 8, Section 21-18-28, in production; Swartz-Compton-Eaton's No. 1 Brainard permit, Section 5-18-27, to drill deeper; Sun Oil Co.'s No. 1, Section 21-25-30, drilling below 2,000 feet; Skelly Oil Co.'s No. 1 Lynch permit, testing sand at 3,474 feet. Bruce Sullivan's No. 1 Lodewick permit, Section 1-18-31, drilling below 2,500 feet; Wooley-Jones' No. 1 Beeson, Section 33-17-30, drilling 3,150 feet.

Lea County

Cap-Rock Oil & Gas Corp.'s No. 1, Section 11-16 32, rigging up rotary; J. S. Covert's No. 1, Section 15-21-33, shut down at 1,100 feet, casing parted; Exploration Co.'s No. 1, Section 25-19-35, ready to spud; Henderson-Dexter-Blair's No. 1 Wyatt permit, Section 34-17-33, drilling below 250 feet; Ingelfield & Bridges' No. 1, Section 4-17-35, restringing cable tools depth 1,385 feet; Maljamar Oil & Gas Corp.'s No. 1 State lease, Section 16-17-32, ready to spud; No. 1 Baish permit, cementing bottom of hole; Mescalero Petroleum Co.'s No. 1 Hughes, Section 27-19-38, drilling below 700 feet; Maljamar's No. 1 Grace Mitchell, in SW cor. Sec. 5-17-32, fishing at 600 feet; T. P. McDonald's No. 1, Section 22-18-34, shut down at 200 feet; Ohio Oil Co.'s No. 1, Pearl Miller, NE cor. NW quarter Section 35-17-32, rigging up; Ohio Oil Co.'s No. 1 Wm. Mitchell, NE cor. SW quarter, Section 18-17-32, running casing at 850 feet; Prairie Oil & Gas Co.'s NE of NE Section 34-18-32, location.

Prideful Old-Timer Boasted of Setting 1,550 Feet of 5-Inch

Paul S. Ache of Denver, Colo., is getting ready to start a deep test 27 miles south and west of La Junta, Colo., and expects to drill to 4,500 feet, is necessary, at an approximate cost of $125,000 or more.

While in La Junta recently he was handed a copy of a letter issued in 1902 by the La Junta Oil & Gas Co. to its shareholders. In the light of what has been learned of Colorado geologically since that time, and the changes deep drilling has made in drilling practices since, the letter is an amusing curiosity.

The letter is accompanied by a log of the well down to its total depth and the estimated lay of the formations below it, which shows the following data:

Colorado Cretaceous (to 400 feet):
Lime, 50 feet.
Rusty lime, 10 feet.
Colorado dark shales, 376 feet.
Coal at bottom.
Dakota (260 feet thick):
Water sand, 64 feet.
Shales and marls, 80 feet.
Water sand, 116 feet.
Jurassic (280 feet thick):
Marls, 280 feet (with two water sands).
Triassic (560 feet thick), red limestone and sandstone.
Red beds, 560 feet (water above and below 1,280 feet).
Total depth, 1,550 feet. Shut down.
Carboniferous (estimated 350 feet thick):
Lime.
Sand.
Silurian (estimated 80 feet thick):
Lime.
Cambrian (estimated 70 feet thick):
Sand.
Granite (estimated at 2,400 feet).

The company had started out to drill a 1,200-foot test, believing that oil would be reached at or about that level. It had drilled to 1,550 feet, and asked its stockholders for sufficient funds to make a deep test to 2,000 feet.

In its financial statement it acknowledged the receipt of $9,072.50 for 359,610 shares of stock, which together with other moneys received brought its receipts up to $10,883.10. It had spent $2,690.71 for the rig, including standard derrick; $2,569.66 for machinery and $3,040.21 for drilling, a total of $8,300.58, which was cheap enough for a wildcat well in Colorado, and administrative expenses had brought the total expenditures up to $10,187.40, leaving a working balance of $695.70.

It is not known whether or not the promoters collected enough funds to drill to 2,000 feet. What would the stockholders have thought had the company asked them to put up $125,000 for a 4,500-foot test? They would have emitted a hollow laugh.

In the course of the letter, strongly emphasized, the point is made that the company had run 1,500 feet, or "more than a quarter of a mile, of 5¼-inch casing." Nowadays they set 2,800 feet of 12½-inch 50-pound casing without a quiver of an eyelid, and a 4,100-foot string of 5 3-16-inch casing is common in the deep holes in Seminole County, Oklahoma. In the Miley deep well in the Athens Field in California, completed last fall, over a mile of 8-inch pipe was set, and 7,440 feet of 4-inch was run.

But the La Junta test was drilled in 1902 when they called a deep test in Oklahoma one that went to 1,200 feet.

Favorable Year for Marketing Branch

Distributors of Gasoline So Far This Year Generally Have Had Wider Margins With Large Increase in Demand

By C. O. Willson

The year 1926, to date is generally conceded to have been an exceptionally favorable period for the producer and refiner of petroleum products. Crude prices in most fields have been from 10 to 20 per cent higher than last year with the highest average prices since 1920. The refiners in most instances have been able to offset these higher costs for raw material with an enlarged recovery of gasoline and also by obtaining higher prices for kerosene, fuel oils and several other products.

A study of the available data leads to the conclusion that the marketing fraternity can join with the producing and refining branches in acclaiming 1926 a prosperous year providing market conditions are not radically changed before the end of the year, a development which does not appear probable at this time. The distributors of petroleum products, considered as a unit, have not only had a substantial increase in demand for most of the products they sell, but what is more significant they have had wider gasoline margins on which to operate. In the case of demand data compiled by the American Petroleum Institute from 32 states, show that gasoline consumption the first seven months of this year was 16.2 per cent greater than for the same period last year.

More Stabilized

Of possible greater importance than either volume or margins is the fact that the gasoline wholesale and retail markets have been more stabilized than in any year since 1920. Wider margins between the refiners' prices and consumers' prices have been in effect for short periods in previous years but they have invariably been followed by exceptionally narrow margins. Distributors all agree that a uniform margin throughout the year is the ideal situation even though it is slightly less than the average in a period when the market is constantly moving up and down.

There has been little fluctuation in gasoline prices at the refineries so far this year. In Oklahoma, which is representative of the Mid-Continent, the price on 58-60 U. S. Motor gasoline has been maintained between a low of 9¼ cents per gallon and a high of 11¾ cents. This contrasts with last year when the low was 8¼ cents and the high, 13 cents. In 1923, the same grade dropped from a high of 14½ cents to a low of 6¼ cents. The same relative situation existed in other refinery groups for the three years.

In the retail markets, the tankwagon and service station prices were advanced the first half of this year and due to the steady tank car market at the refineries there have been only minor changes since. This has meant that the distributors have been able to carry on their business with a minimum of speculation in markets, always a hazardous undertaking to that branch of the industry whose efforts should be confined to the merchandising of petroleum products.

Wider Margins

In Tables 1 and 2, data are given showing the relative situation in marketing. The chart shows graphically the situation summarized in Table 1.

Readers of The Oil and Gas Journal are familiar with the table published once a month showing the tankwagon prices in 50 representative cities and the changes made during the preceding month. These 50 cities are scattered in 46 states so that the table gives a comprehensive picture of the tankwagon markets for the entire country.

In Table 1, the average price of these 50 cities the first day of each month for 1923, 1924, 1925 and the first eight months of this year are given. In the next column the average weekly price for each month on 58-60 U. S. Motor gasoline in tank car lots at Oklahoma (Group 3) refineries is given. These Oklahoma quotations can be considered representative as to fluctuations of refinery prices for the same grade gasoline in all parts of the country. Several refinery groups, due to the freight rate advantage, secure higher prices for their gasoline but it will be found over a period of several months, that the ups and downs of the market very closely follow those of Oklahoma, which is the dominant refining group of the Mid-Continent, the most important open market refining area of the entire industry.

This table clearly supports the statement made in the beginning that distributors so far this year have had a wider margin on which to market gasoline than they had last year. In fact, based on averages for the first eight months of this year, the margin is slightly greater than 1924, although approximately a cent less than the average for 1923.

Record of Three Years

The year, 1923, was a year of exceptionally wide margins in gasoline distribution. The refinery market collapsed early in the year due to an overproduction of gasoline, a large part of which came from California. Eastern distributors were slow in reducing their tankwagon and service station prices in line with the rapidly slumping tank car market and as a result the distributors had an exceptionally wide market on which to operate.

It is interesting to note, in this connection that the average margin for the year of 8.68 cents including freight between the tankwagon and tank car markets as shown in Table 1, was only about a cent less than the 9.75 cents per gallon received by Oklahoma refiners for the most important product they manufacture. This, of course, does not mean that all the distributors actually had this average margin of 8.68 cents less freight on which to operate. In several of these cities, Oklahoma gasoline is never sold due to competitive conditions, largely dependent on freight rates. To secure an accurate picture of actual margins it would be necessary to subtract the freight rates to cities which buy from Oklahoma refiners from the margin as shown in Table 1. This has been done in Table 2, in the case of five cities.

The wide margins of 1923 were lowered somewhat during 1924, although market developments both in the case of tank car and tankwagon markets resembled those of 1923. By 1925, major distributors came to realize that these wide margins were a detriment rather than a benefit. It was found that the wide margins attracted many newcomers to the distributing business so that the benefits from the wide margins did not offset the losses in gallonage.

As a result, the margins in 1925 were narrowed. In fact they were reduced in some instances to such narrow margins that both independent jobbing interests and the marketing departments of large companies found it extremely difficult to operate profitably. The narrow margins, however, were unquestionably beneficial to the marketing industry as a whole as it served to eliminate those who had been able to sell under the generally recognized market, including state and city officials who had been attracted by the political possibilities of bringing about low gasoline prices.

The reduced margins served as a check in the too-rapid expansion of marketing facilities and also forced a lowering of other costs incident to gasoline distribution.

Higher Margins This Year

The distributing branch this year, however, has found it expedient to increase these margins slightly. Table 1 and the chart shows what has happened so far this year. Although crude prices have been considerably higher than last year, the consumers of gasoline have been

No. 2—Table showing average gasoline tankwagon prices, exclusive of taxes, at five middle west cities and average net margin between tankwagon prices and 58-60 U. S. Motor gasoline in tankcars f.o.b. Oklahoma (Group 3) refiners. Prices given in cents per gallon.

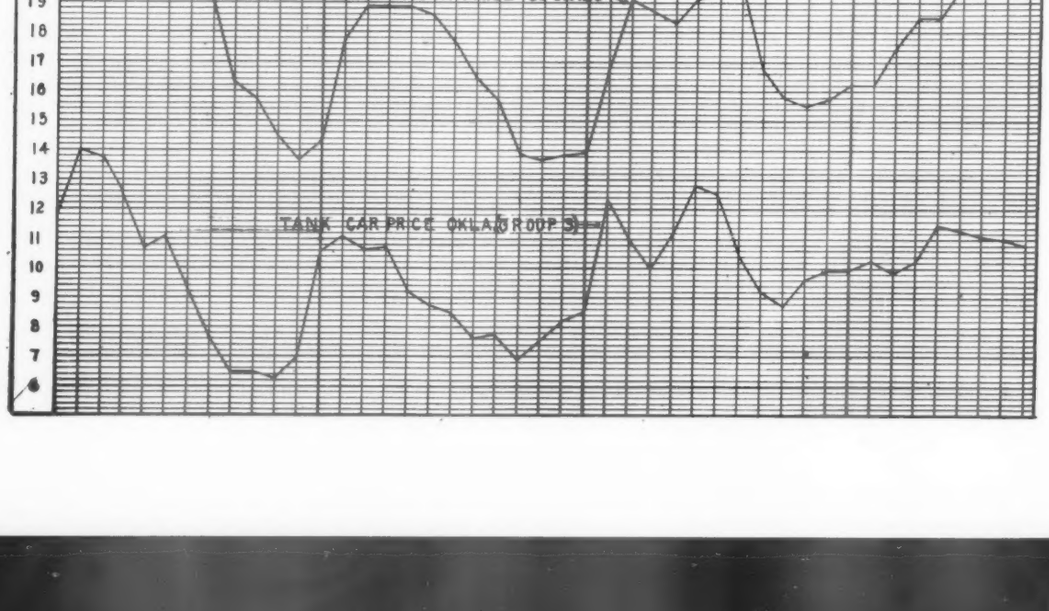
	Rate, C'ts per Gallon	1925 Daily Aver. Tankwagon	1925 Average Margin	8½ Months, 1926— Daily Aver. Tankwagon	8½ Months, 1926— Aver'ge Margin
Chicago	2.38	16.62	3.69	16.86	3.84
Indianapolis	3.14	17.18	3.49	18.08	4.28
Des Moines	2.18	16.6	3.87	18.45	5.61
Detroit	3.73	17.67	3.39	18.68	4.29
Milwaukee	2.61	17.04	3.88	17.98	4.71
		17.02	3.65	18.01	4.55

Note: Tankcar price used in table was based on low quotations of The Oil and Gas Journal which was 10.55 cents per gallon in 1925 and 10.66 cents per gallon the first eight and one-half months of this year. The net spread is the tankcar price plus freight subtracted from the tankwagon price.

No. 1—Table and chart showing relationship between gasoline prices in Oklahoma and average tankwagon prices, exclusive of taxes, of The Oil and Gas Journal's fifty representative cities for 1923, 1924, 1925 and the first eight and one-half months of 1926.

	1923 *Tankwag'n 50 Cities	1923 †Tankcar Group 3	1923 ‡Margin	1924 Tankwag'n 50 Cities	1924 Tankcar Group 3	1924 Margin	1925 Tankwag'n 50 Cities	1925 Tankcar Group 3	1925 Margin	8½ Months Tankwag'n 50 Cities	8½ Months Tankcar Group 3	8½ Months Margin
January	19.21	11.85	7.36	14.32	10.55	3.77	13.92	8.47	5.45	16.13	9.85	6.82
February	19.33	14.00	5.33	17.68	11.06	6.62	16.74	12.31	4.43	16.21	10.25	5.96
March	21.53	13.75	7.78	18.87	10.62	8.25	19.06	11.00	8.06	17.27	9.87	7.4
April	21.46	12.55	8.91	18.85	10.7	8.15	18.68	10.06	8.62	18.52	10.2	8.32
May	20.55	10.69	9.86	18.85	9.19	8.66	18.35	11.25	7.1	18.49	11.55	6.94
June	19.95	11.06	8.89	18.61	8.81	9.81	19.12	12.9	6.22	19.61	11.36	8.26
July	19.89	9.31	10.58	17.66	8.45	9.21	19.39	12.5	6.89	19.7	11.12	8.58
August	19.11	7.62	11.49	16.5	7.66	8.84	19.41	10.56	8.85	19.7	10.99	8.71
September	16.24	6.44	9.8	15.75	7.75	8.00	16.7	9.1	7.6	19.59	§10.81	8.78
October	15.77	6.44	9.33	13.95	6.87	7.08	15.8	8.75	7.05	.....	.....	.....
November	14.45	6.22	8.23	13.75	7.56	6.19	15.53	9.62	5.91	.....	.....	.....
December	13.66	7.00	6.66	13.87	8.2	5.67	15.76	9.87	5.89	.....	.....	.....
Average	18.43	9.75	8.68	16.55	8.96	7.59	17.37	10.53	6.84	18.36	10.66	7.75

*Average price first day of each month in fifty cities located in 46 states. †Average price based on low weekly quotations of The Oil and Gas Journal for 58-60 U. S. Motor gasoline f.o.b. Oklahoma (Group 3) refineries. ‡Includes freight. §First two weeks.



called upon to pay only about 1 cent more per gallon for their gasoline.

Gasoline prices at the refineries have in fact been practically the same as the average for last year. The refiners have been able to sell the gasoline at these relatively low prices due to greater efficiency in the operation of their plants and also because higher prices have prevailed for other products.

The average price on 58-60 U. S. Motor gasoline so far this year in Oklahoma has been 10.66 cents per gallon. The average price last year was 10.53 cents or only .13 cent difference. The average tankwagon price for the 50 cities so far this year has been 18.36 cents per gallon, an increase of .99 cent per gallon over the 17.37-cent average for last year. This difference in tank car and tankwagon prices is reflected in a spread of 7.75 cents so far this year and 6.84 cents last year. The difference of .91 cent per gallon based on percentages represents an increase of about 14 per cent in the distributors' margin. It is this percentage which has made this year more profitable to most distributors.

Table 2

Largely the same situation is shown in Table 2. This table is confined to conditions found in the Mid Continent refining area and representative distributing points in the Middle West. It shows actual margins between the tank car price received by Oklahoma refiners and independent jobbers, the freight rate between the refinery and consuming point being subtracted from the gross margin.

This table shows that the average tankwagon price at Chicago, Indianapolis, Des Moines, Detroit and Milwaukee was 17.02 cents per gallon. The average net margin (tankwagon-freight rate-tank car price from Oklahoma) was 3.65 cents.

This year the average tankwagon price up to September 15, was 18.01 cents and the average net spread was 4.55 cents. This shows as in Table 1 that the distributors have had almost 1 cent greater margin with which to operate.

Quantity Discounts

The only qualifying factor in these wider margins in the sale of gasoline is the operation of the quantity discount plan which has been in effect in several parts of the country this year. These plans give the purchasers discounts based on quantity purchases under the established service station or tankwagon prices on a sliding scale up to 2 cents per gallon. The exact terms of representative contracts will be found on the Tankwagon Market page of this issue.

While many of these contracts were not offered by distributors until this year, it cannot be said that the plan under which they operate is new. In practically all parts of the country it has been customary to give the large tankwagon or service station buyers concessions under the general market. It was this more or less secret practice which resulted in several of the major organizations announcing publicly a quantity discount plan for their large customers. It is based on the principle that it is less expensive for the distributors to handle large accounts and it is therefore good merchandising practice to pass on to the consumers the saving in marketing costs.

The growth of bus and truck transportation, the operation of fleets of delivery cars by mercantile establishments and other developments in which a llarge number of cars are operated by one concern has added to this quantity discount business. However, since the per unit cost of handling is less, it has worked no special hardship on the distributors

There have been abuses of this quantity discount plan in some sections. Buyers have been given discounts regardless of whether it was justified by the volume of business. In these cases the distributors have suffered and the extra margin under the established tankwagon has not offset the losses.

ROCKY MOUNTAIN AREA

(Continued from Page 44)

found a Lakota well in Section 2-39-79 at 2,479 feet and did not drill into the sand to see what the well will do. The same company found a second Wall Creek sand well in Section 10-40-79 at 2,211 feet and this will make a pumper of about 50 bbls.

The Salt Creek Consolidated Oil Co. has a 25-bbl. well in Section 31-40-78 at 2,098 feet in the second Wall Creek sand.

The Wyoming Associated Oil Co. completed a Lakota well to the top of the sand and shut in at 2,400 feet in Section 23-40-79 and will not drill in for some time to come.

The Wyoming Oil Fields Co. has an average pumper in Section 26-40-79 at 1,126 feet. After being shot this well swabbed 30 bbls.

Montana Fields

In the Montana fields, the interest is livened by the raise in the price of crude at Sunburst, but operators in the other fields do not look for any price change in the near future.

The Hard Rock Oil Co. will turn gas into the new 10-mile line from the Bowes structure to Chinook today. The people of Chinook are prepared to celebrate the event with a holiday and displays of fireworks and torches of burning gas when the valves are opened. The plant of the Utah Idaho Sugar Co. will start operating Monday morning with natural gas.

In the Sunburst Field, the Mouse River Oil Co. found a dry hole in Section 8-34-1, drilling to the Madison lime and finding all sands water. This wildcat was located far to the east of the field and was interesting as had it come in a producer it would have added at least 8 miles to the east side of the field.

On the extreme west side of the Sunburst Field, Section 1-35-5, the Sand Point Oil Co. has a showing of oil that may develop into a producer. The well is shut down waiting on officials to reach the site before it is drilled in.

Six dry holes were found in Sunburst the past week and eight nominal producers with one gasser was the reward of the operators during the same period.

ROCKY MOUNTAIN FIELDS

Daily Average Pipe Line Runs

	Bbls.
Wyoming	
Salt Creek	46,790
Teapot	890
Big Muddy	3,240
Grass Creek	3,170
Elk Basin	840
Greybull	20
Rock River	2,800
Notches	300
Rex Lake	250
Lance Creek	1,140
LaBarge	220
Poison Spider	900
Osage	340
Hamilton Dome	1,150
Lander	360
Byron	40
Pilot Butte	40
Lost Soldier	5,410
Ferris	80
Simpson Ridge	130
Montana	
Cat Creek	2,700
Lake Basin	220
Sunburst	25,000
Colorado	
Florence	500
Moffat	3,415
Tow Creek	790
Fort Collins	3,790
Boulder	25
Rangeley	100
New Mexico	
Hogback	700
Rattlesnake	860
Artesia	3,000
Total	109,210

Field Runs for August

Salt Creek	1,506,790
Teapot	35,920
Big Muddy	102,870
Grass Creek	96,420
Elk Basin	26,350
Greybull	620
Rock River	84,750
Notches	8,160
Rex Lake	7,960
Lance Creek	38,280
LaBarge	3,720
Poison Spider	39,040
Osage	10,680
Hamilton Dome	35,990
Lander	8,740
Byron	1,170
Pilot Butte	3,550
Lost Soldier	165,360
Simpson Ridge	4,560
Ferris	2,200
Cat Creek	82,950
Sunburst	764,500
Lake Basin	6,650
Florence	15,500
Moffat	100,467
Fort Collins	125,600
Boulder	775
Tow Creek	28,665
Rangeley	3,100
Hogback	21,810
Rattlesnake	27,450
Artesia	93,000
Miscellaneous	3,000

TYPE OF STILLS TO BE INSTALLED DEPENDS ON USE

(Continued from Page 92)

day, has little effect between 1,000 and 5,000 bbls. per day, and begins to be a detriment over 5,000 bbls. per day.

So do not be concerned about the big fellow's costs. If you will use modern methods under good live management you can do as well or better and a mighty good place to start is where the crude oil undergoes the first process, right at the stills.

EASTERN REFINERS DISCUSS PROBLEMS

(Continued from Page 32)

the pour test in the usual manner. Verify the result by re-heating to 115 degrees Fahrenheit and testing as before. The two tests should agree within the limit of error. (5 degrees Fahrenheit).

"In only one case was it necessary for us to repeat the test more than once to secure the maximum possible pour test in those cases where the sample had previously been subjected to varying degrees of heat within the same day. In no case was it necessary to repeat the test at all when the samples had been subjected to high temperatures 24 hours previous to testing.

"The above method was tried on oil which had been pre-heated to temperatures ranging up to 400 degrees Fahrenheit, with results as shown in Table 2.

"As the result of this work we have reached the following conclusions:

"1. If an oil is heated to any specified temperature, prior to testing, or immediately prior to receipt by the testing laboratory, the pour point will depend on the temperature to which the oil has been heated.

"2. In all cases the 'high point,' that is, the pre-heating temperature at which the maximum possible pour point is attainable, is about 115 degrees Fahrenheit, and the pour thus attained more truly represents the ultimate condition the oil will reach in storage than any other.

"3. In order to secure concordent results regardless of any previous heat treatment to which the oil has been subjected prior to receipt by the testing laboratory, it is only necessary to carry out the simple procedure outlined above. No sample, the heat treatment has occurred 24 hours previous to testing requires repetition of the procedure to yield concordent results.

"In view of the above, the following modification of the Tentative Method of Test for Cloud and Pour Points of Petroleum Products (D-97-23-T) is recommended to the consideration of the Sub-Committee on Cloud and Pour Test:

"1. Section II — Eliminate the first sentence. Add the following at the end of the second paragraph: 'Heat, without stirring, to a temperature of 115 degrees Fahrenheit in a bath maintained at a temperature of not higher than 118 degrees Fahrenheit. Then cool to 90 degrees Fahrenheit in air.'

"2. Section II—At the end of the last paragraph add the following: 'In those cases where it is known that the sample has been subjected to some temperature higher than 115 degrees Fahrenheit during the preceding 24 hours, or where the history of the sample in this respect is not known, the sample shall be held in the laboratory 24 hours before testing, or the above procedure shall be repeated on that portion of the sample which has been used in the above test, without transfer or stirring, until three consecutive concordent results are attained."

LONE STAR'S DIVIDEND

PITTSBURGH, Pa., Sept. 18.—Lone Star Gas Corp. declared a quarterly dividend of 43¾ cents, payable September 30 to stock of record September 21. Three months previously an initial quarterly dividend of 37½ cents was declared.

CALIFORNIA GASOLINE REDUCED THREE CENTS

LOS ANGELES, Calif., Sept. 20.—The principal development in the West Coast refined market during the past week was a 3-cent reduction in the gasoline tankwagon price by the Union Oil Co. effective in the Los Angeles area. The action of the Union follows several weeks of price cutting in this area by small distributors who buy their supplies from refineries located near here.

Up to late today, the Standard Oil Co. of California had not met the reduction. The Standard, about two weeks ago sought to solve the problem of cut rate prices by placing on sale at its stations a gasoline which sold 3 cents under its principal domestic grade. It is assumed other large distributors will be compelled to meet the Union cut which in turn may force the smaller refiners to lower their tank car prices.

As fars as volume is concerned, sales of motor gasoline in the Pacific Coast states have been very satisfactory during the past few months. The Pacific Coast states also suffered from a very late spring, although to a less extent than the area east of the Rocky Mountains. The summer months, however, have been extremely pleasant and have brought a gasoline consumption some 15 per cent in excess of the period for 1925. Another helpful factor has been the considerably increased tourist travel on the Pacific Coast, much of this attributed to the slowing down of activity in Florida. The increased gasoline sales have not benefited the old established marketing companies as much as might be imagined. A disproportionate amount has been captured by companies such as General Petroleum Corp. of California, Richfield Oil Co., and California Petroleum Corp. The Richfield and California Petroleum have shown the most marked increases in sales, particularly in southern California, whereas the General Petroleum is doing an overwhelming business in the Northwest. Because of its policy of selling only through independent dealers, it has succeeded in obtaining a great bulk of the so-called local trade, which patronizes the smaller local distributors and service station owners. One feature is its comparatively steady volume through the winter as well as the summer months.

The use of cracked gasoline on the Pacific Coast is becoming very general, there being only two major marketers who are not selling a motor gasoline containing a considerable proportion of cracked products. That this tendency will continue is unquestionable. All the large refining companies are engaged in greatly increasing their cracking plant facilities.

The cut-priced gasoline situation is at its worst in and around Los Angeles, and is not serious in the central and northern portions of the Pacific Coast. In San Francisco, Oakland and Portland there are a few dealers who sell gasoline at less than standard prices but the price reductions amount at most to 1 cent per gallon compared with as much as 4 cents a gallon in and around Los Angeles.

Lubricating oil sales have been keeping pace with gasoline sales and a noticeable tendency is the sale of a larger proportion of California asphalt base lubricants compared with paraffin and mixed base lubricants brought in from the East. This tendency has been slowly growing but seems for some reason to have taken a spurt, due perhaps to intelligent billboard advertising on the part of the California marketing companies.

DEATH OF BRYAN HENDON

The Tropical Sun, published in Maracaibo, Venezuela, announces the death of Bryan Hendon, geologist, of Shawnee, Okla., in the Gulf Hospital in Maracaibo. He had been operated on for appendicitis. Mr. Hendon went to Venezuela in 1925, and was in the employ of the Richmond Petroleum Co., up to the time of his death.

REFINING AND MARKETING

TO RETIREMENT AFTER 44 YEARS' SERVICE

T. J. Thompson, general manager of the sales division and a director of the Standard Oil Co. of Indiana, has retired

T. J. Thompson

after 44 years of continuous service, according to an official announcement of the past week. He has been succeeded by Amos Ball, who has been assistant general manager in charge of the eastern division of the company's marketing operations.

Born in England, Mr. Thompson came to this country with his parents when he was 9 years old. He started work for the Standard when he was 20 years old, in the capacity of a tankwagon driver. He had a steady advancement in the marketing department of the company and in 1922 was made a director of the company and placed in charge of the sales division.

PORTABLE GASOLINE PLANT IN SEMINOLE

A natural gasoline output in excess of 11,000 gallons daily from one well is the record established by the Independent Oil & Gas Co. at its new portable plant in the new Seminole Pool of Oklahoma. The plant, which is the Newton type, was placed in operation during the past week and is handling the gas output from No. 1 Fixico, SW cor. NE, Section 29-9-6, the discovery well in the Wilcox sand in that pool.

Shortly after the well was brought in the company decided to install one of the portable units. The installation marks the first venture of the Independent company in the natural gasoline business. The gas has a large gasoline content, only 2,500,000 feet being run to the plant at present. The rated capacity of the unit is 7,500 gallons daily.

GENERAL REFINING CO. REVIVED

CHICAGO, Sept. 18.—The name of the General Refining Co., at one time prominent in Chicago oil circles, has been revived and the business established by an incorporated company which has temporary offices at Room 625, the American Bond & Mortgage Bldg., 127 N. Dearborn St. The business will be general marketing of petroleum products. Among those connected with the concern are J. B. (Jack) Ryan, James X. Galbaugh, and R. W. Eggert.

Gasoline Consumption Greater in July, 1926 Than in July, 1925

Seven out of 38 states consumed less gasoline in July of this year than the same month last year, according to data compiled by the American Petroleum Institute based on state gasoline tax reports. The states which showed a reduction in gasoline consumption were Arkansas, Kentucky, North Dakota, South Dakota, Missouri, Utah and Wyoming.

The losses in these states, however, were small and were more than offset by the increase in the gasoline consumption of Florida. The gasoline sales in Florida increased from 16,009,000 gallons in July of last year to 22,176,000 gallons in July of this year. Ohio showed the largest gain of any state, its consumption of 71,070,000 gallons in July of this year being approximately 11,000,000 gallongs greater than the same month last year. North Carolina, Indiana, Texas, Michigan, Kansas and Wisconsin are other states which showed large increases. The total increase in gallonage for 32 of the states for which comparative figures are available for the two months was 12.9 per cent.

This increase of 12.9 per cent was less than the average increase for the first seven months of this year. The gasoline consumption of the 32 states for the first seven months totaled 2,370,817,000 gallons, or 16.2 per cent more than the first seven months of last year.

The following table gives the gasoline consumption by states for July, 1926 and July, 1925.

GASOLINE CONSUMPTION BY STATES JULY, 1926

	July, 1926 Gallons	July, 1925 Gallons
Alabama	12,304,000	10,009,000
Arizona	2,846,000	2,459,000
Arkansas	8,963,000	9,617,000
Colorado	11,460,000	9,928,000
Delaware	1,819,000	1,714,000
District of Columbia	4,802,000	4,243,000
Florida	22,176,000	16,009,000
Georgia	13,840,000	12,808,000
Idaho	4,569,000	3,590,000
Indiana	31,600,000	26,212,000
Kansas	29,270,000	21,584,000
Kentucky	7,947,000	9,955,000
Louisiana	12,181,000	10,626,000
Maine	9,454,000	8,534,000
Maryland	11,338,000	10,674,000
Minnesota	30,496,000	28,256,000
Mississippi	10,395,000	8,160,000
Missouri	30,637,000	31,773,000
Nevada	1,158,000	983,000
New Hampshire	5,367,000	4,785,000
New Mexico	2,417,000	1,922,000
North Carolina	17,298,000	11,327,000
North Dakota	6,832,000	7,680,000
Oklahoma	18,806,000	17,866,000
Oregon	12,452,000	11,278,000
South Carolina	8,172,000	7,501,000
South Dakota	7,231,000	7,360,000
Texas	49,304,000	42,635,000
Utah	3,587,000	3,953,000
Virginia	14,181,000	12,633,000
Washington	19,029,000	17,159,000
Wyoming	2,780,000	2,825,000
Total	424,705,000	376,058,000
Daily average	13,700,000	12,131,000
Increase over previous year:		
Amount	41,279,000	.....
Percentage	12.9	.....
Iowa	26,320,000	25,131,000
Michigan	57,584,000	50,083,000
Nebraska	15,759,000	14,297,000
Ohio	71,070,000	60,178,000
Rhode Island	5,654,000	5,063,000
Wisconsin	32,496,000	28,115,000

WILMINGTON, DEL. STATION

Announcement has been made at Wilmington, Del., that the Schock Independent Oil Co. will spend $300,000 in that city on the erection of an importing and distributing station, with piers on the Delaware River adjacent to the Municipal Marine Terminal. Storage tanks will be erected with a capacity of 5,000,000 gallons. The Schock company, which markets the Sico petroleum products, has its headquarters at Mount Joy, Pa. and branches at Harrisburg, Lancaster, Lebanon, Carlisle and York, Pa.

JOBBERS FROM FOUR STATES TO MEET NEXT WEEK IN KANSAS CITY

A large attendance of both jobbers and refinery representatives is expected at the meeting to be held September 28 and 29 at the Hotel President, Kansas City, Mo. The meeting is being held under the joint auspices of the state jobber associations in Kansas, Iowa, Nebraska and Missouri. The first half day will be devoted to meetings of individual associations and the remaining time will be taken up in joint sessions.

Following is the program as announced by George S. Allee, secretary of the Missouri association:

Tuesday, September 28
9 A. M.
Registration
10 A. M.

Individual State Meetings—
Kansas Oil Men's Association.....Room 201
Iowa Independent Oil Men's Association.....Room 203
Nebraska Independent Oil Men's Association.....Room 205
Missouri Oil Men's Association.....Room 207

2 P. M.
(Junior Assembly Room)
GEORGE CORYELL, - - - - - - - - Presiding
President Nebraska Independent Oil Men's Association

The Gasoline of the Future—
DR. GUSTAV EGLOFF.....Universal Oil Products Co.
DR. ROY CROSS.....Kansas City Testing Laboratories
C. L. HENDERSON.....Vickers Petroleum Co.

Open Forum Discussion After Each Address.

Increase Your Grease Business—
J. R. BATTENFELD.....Battenfeld Grease & Oil Co.

7 P. M.
(Hotel President Roof Garden)
Stagg Dinner—Smoker—Cabaret—Entertainment

Wednesday, September 29
10 A. M.
A. L. LOMMEL, - - - - - - - - Presiding
President Iowa Independent Oil Men's Association

Better Business Bureau's Check of Oil Substitutes—
GEORGE M. HUSSER.....Manager K. C. Better Business Bureau

An Oil Man's View of Substitution—
WARREN C. PLATT.....Editor National Petroleum News

Lubrication: What It Means—
L. V. SURTEES.....Mid Continent Petroleum Corp.

LUNCHEON—ROOF GARDEN
A. C. CARPENTER, - - - Presiding
President Kansas Oil Men's Association
Introduction of Distinguished Guests

What a State Association Does for the Local Jobber—
CHARLES M. SUTHERLAND, Sec. Nebraska Ind. Oil Men's Ass'n

FUEL QUESTIONNAIRE IS READY TO SEND OUT

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal,

WASHINGTON, D. C., Sept. 20.—The United States Bureau of Mines, in making a detailed survey of the fuel oil market, is soliciting replies to a questionnaire now ready to be sent out in response to requests from the petroleum industry and from consumers. The manufacturers of oil burners are also asked to submit information. Answers will be treated as strictly confidential and will be used only in the compilation of totals, states S. H. Hill, chief petroleum engineer.

The questionnaire begins by stating definitions as follows:

Domestic Burner—A burner used for house heating, where an attendant for the burner is unnecessary except for a few minutes a day.

Commercial Burner—A burner used for supplying heat in large or commercial buildings such as apartments, hotels, clubs, offices, churches, hospitals, etc., and where an attendant for the burner is necessary during most or all of the time.

Industrial Burner—(Type A)—A burner used in supplying heat for high-pressure boilers, power houses, locomotives, steamships, etc. (Type B)—Smaller burners used for portable oil burning equipment of all kinds both indoors and outdoors.

DENIES PHILLIPS MERGER

Referring to persistent rumors regarding a merger involving the Phillips Petroleum Co., Frank Phillips, president, states no negotiations are pending and there is no occasion for the company to consider any merger or to anticipate any new financing.

SKELLY CO.'S NEW UNITS

The Skelly Oil Co. has started the construction of three Jenkins cracking units at its El Dorado, Kans., refinery. The new installations will be of the high-pressure type recently placed on the market by the Jenkins Petroleum Process Co.. The Skelly company is the largest user of the Jenkins equipment, having six units in operation at the present time at its El Dorado plant.

OIL LECTURES AT N. Y. U.

NEW YORK, Sept. 18.—A course on "The Oil Industry and Company Operations," will be given at the Wall Street branch of the New York University, 90 Trinity Place, New York City, by Ernest R. Lilley, starting September 22. A more advanced course will also be given entitled "Oil Executives' Course," designed to meet the requirements of those who wish specialized information on the marketing side of the industry.

BRITISH FUEL OIL CONSUMPTION

WASHINGTON, Sept. 20.—The increasing importance of British domestic production of fuel oil is shown in a report from Trade Commissioner Homer S. Fox, London, to the Department of Commerce. During the past few years, the report states, the indicated consumption has remained fairly constant.

AGITATORS-
Why not let
GRAVER
build them along with all the rest of your
STEEL PLATE
Refinery Equipment?

Graver Builds

Tanks
- *Welded*
- *Riveted*
- *Gas Holders (Riveted, Inside & Outside Welded)*
- *Structural Supports*
- *Tower Tanks*
- *Standpipes*
- *Any Size Tanks Erected Anywhere*

Refinery Equipment

Jenkins Cracking Process

Stacks-Breechings

General Steel Plate Construction

Water Softeners
- *Hot Process*
- *Cold Process*
- *Zeolite*
- *Household*

Filters—*Pressure*

Purifying Systems for Swimming Pools

GRAVER Corporation Founded 1857
EAST CHICAGO, INDIANA

NEW YORK Grand Cent. Term. | CHICAGO Steger Building | TULSA Atlas Life Bldg. | HOUSTON West Building

Brief Items for Plant Operators

Marland Starts Gasoline Program In Panhandle Area

The Marland Oil Co. has entered the natural gasoline business in the Texas Panhandle with a program that calls for three plants to start with, the total capacity aggregating more than 50,000 gallons daily. In addition to these three plants which have already been decided upon, it is probable that a couple of others will be added shortly.

Construction on the main plant started last week. It is located in the NW cor. S half NE, Section 20, Block Y, M. & C. Survey, Hutchinson County, near the company's No. A-4 Johnson. Bessemer engines and Southwestern and Newton absorption and distillation equipment are to be used, the plant will have a capacity of from 20,000,000 to 30,000,000 feet of gas daily.

Another Marland plant will be located north of the Canadian River in Hutchinson County on the company's Dial-Perkins lease, in the E half SE, Section 1, Block XO2. This one will have a capacity of 10,000,000 feet for the present, although it will probably be increased to 20,000,000 feet later on. The gas on this lease tests from 1½ to 2 gallons per 1,000 feet.

The third Marland plant is to be located in Carson County, in the C N half, Section 116, Block 5, about half a mile south of the Hutchinson County line. Its capacity will be about 10,000 gallons. The gasoline content of the gas in this area is hard to figure because it varies greatly, depending considerably on the production of the wells.

The Phillips Petroleum Co., which already has 3 oil absorption and 4 charcoal absorption plants in the Panhandle, is planning to start a 22-unit plant in Section 69, Block 46, H. & T. C. Survey, just south of the Canadian River. The company's Johnson-Easter and Johnson-Cruso leases are in this section.

The Dixon Creek Oil Co. is also figuring with Marland and Phillips Petroleum Co. on a plant to be located on the Dixon Creek property in Sections 11 and 14, Block Y. The gas supply on these two quarter-sections is sufficient, considering its content, to operate a 30,000-gallon plant.

The Skelly Oil Co.'s plants in Hutchinson County, manufactured 220,728 gallons during August.

A peculiarity of Panhandle gas production is that, unlike most gas in other districts, it apparently becomes leaner instead of richer as the wells grow older. The Marland Oil Co.'s seven producing wells in the SW, Section 107, Block 5, Carson County, originally yielded about 1½ gallons per 1,000 feet, early this year but the recovery is now down to about 0.5 gallons.

LIQUID FUEL COMMITTEE

WASHINGTON, D. C., Sept. 18.—The committee on liquid fuels of the International Union of Pure and Applied Chemistry meeting in this city this week appointed a permanent committee to submit to the Secretary of the Union before February 28, 1927, a report on the standardization of liquid fuel in their several countries. From these reports the president and secretary of the committee will compile a final report for the next meeting of the International Union at Warsaw, September 15, 1927. The members of this committee are: A. Ruys, president, Holland; A. Mora, secretary, Spain; Louis Bermejo, Spain; Mme. M. Bakunin and M. Helbig, Italy; Justin DuPont, France; Stanislav Pilat, Poland; Ross Peter Anderson, United States; D. Dane, Rumania; and M. Dunstan, England.

DISTILLATION TEST OF UPTON COUNTY CRUDES

The action of the Kay County Gas Co. during the past week in reducing its posted schedules in Crane and Upton County fields has attracted the attention of the refining fraternity relative to the characteristics of the crude. The crude supply, which now totals approximately 7,500 bbls. daily with a steady increase assured, very closely resembles that of the Big Lake Pool, the closest large producing area.

A distillation test made by the Independent Oil & Gas Co., a large producer in that field, showed that the gravity was 29.4 degrees A. P. I., b.s. and water .25 per cent. The crude has a semi-asphaltic base with a sulphur content of approximately 1 per cent. The color is black with a strong odor of hydrogen sulphide.

The test was made with a 2-gallon sample in a batch still with a Hempel distillation of the benzine. The summary showed the following recoveries:

25.5 per cent 54.9 gravity benzine cut at 41.2 at worm.

7.1 per cent 37.5 gravity kerosene distillate cut at 36.5 at worm.

8.1 per cent 33.0 gravity gas oil cut at 31.2 at worm.

9.3 per cent 29.2 gravity heavy distillate.

48.71 per cent 17.1 gravity residuum.

1.29 per cent mechanical and evaporation loss.

In the distillation of the benzine cut a recovery of 22.95 per cent gasoline was obtained at 437 tower temperature. It was found difficult to treat the gasoline with usual procedure of sulphuric acid and caustic soda. The hypochlorite treatment gave the best results.

WATSON REFINERY COMPLETED

The California Petroleum has just finished work on the last unit of its refinery at Watson, Calif., and this plant, with the new addition, now has a capacity of 35,000 bbls. daily. Altogether the corporation has four plants, having recently acquired majority control of the International Refining Co.'s 4,000-bbl. refinery at Sunburst, Mont. The Watson tank farm, of the California Petroleum, which consists of 268 acres located not farm from Los Angeles Harbor, is generally regarded as one of the most advantageously situated farms in the State.

JOHN J. McCONNELL DIES

John J. McConnell, chief engineer of the Louisiana Oil Refining Corp. and widely known among plant operators in the Mid-Continent Field, died last week at Shreveport, La., following a brief illness. His death followed an operation for appendicitis. Mr. McConnell was connected with the Louisiana corporation for several years and was in charge of the engineering work while its Louisiana refineries were being enlarged. During the war he held the rank of major. He was 40 years old.

AMONG THE TECHNICAL MEN

W. E. Perdew, manager of the refining department of the Derby Oil Company, is one of several successful plant operators in the Mid-Continent Field who received their university training and early oil experience in California.

W. E. Perdew

Mr. Perdew graduated from Leland Stanford University in 1911, receiving a degree in chemical engineering. Immediately after graduation he became connected with the Kern Trading & Oil Company (Pacific Oil Company). For six years he was engaged in experimental work in both the producing and refining departments of that company.

In 1917, he left the company and became associated with the Pittsburgh and Washington offices of the Bureau of Mines. His work with the Government covered a varied field. He had a part in starting the bureau's monthly reports on refinery operations which have continued up to the present time.

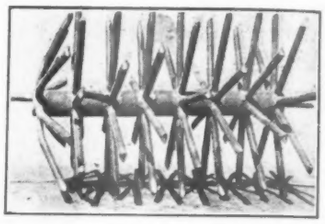
During the war, Mr. Perdew was in Europe as a member of the delegation representing the United States in the Inter-Allied Petroleum Conference called for the purpose of assuring the Allies adequate petroleum supplies.

Following the war, Mr. Perdew was associated with the Union Petroleum Company as a vice president in charge of plant operations. He continued with this company for several years obtaining a wide experience not only in refining practices but also in marketing, especially for the export trade.

He joined the Derby organization in 1924, and since that time has had charge of the company's 5,000-barrel refinery located at Wichita, Kans. Since his connection with the Derby company, Mr. Perdew has had a prominent part in technical matters of interest to Mid-Continent operators. He is a member of Committee D-2 (petroleum committee) of the American Society for Testing Materials.

Use Steam Coil To Dry Clay for Gasoline Filter

One of the smaller western gasoline companies recently found it necessary to find a broader market for its product due



to increased production. Until that time it had disposed of its entire output to crude oil operators who used the gasoline to thin the heaviest oil so that it could be piped to the refineries.

The new market demanded a pure white gasoline, rather than the off-color product sold to the oil companies. It was necessary, therefore, to filter the gasoline through a special clay, similar to fuller's earth, to remove the impurities. However, it was found that after a brief period of use this clay became unserviceable, but could be reclaimed for further use if it could be satisfactorily dried.

After much experimenting it was found that a "porcupine" steam coil, fitted in a circular steel tank, gave the best results. Difficulty was met at first, since it was found impossible to fabricate this "porcupine" coil with standard pipe fitings. But by use of oxwelding the coil was very quickly made and installed.

The "porcupine" consists of a central feed pipe of 6-inch diameter from which radiates arms or spines of 2-inch pipe. These spines are swaged and welded shut at the outer end and welded to the main pipe at the inner end. Eight rows or layers of spines are used, evenly spaced along the main pipe. Each row contains eight spines uniformly spaced about the circumference. The lowest row of spines is heated and bent upward to conform with the conical bottom of the tank. In this manner it is possible to secure an even heat throughout the tank and the clay is uniformly and thoroughly dried.

Recent Patents

1,596,591. Process for Breaking Petroleum Emulsions. Melvin De Groote, St. Louis, Mo., assignor to William S. Barnickel & Co., Webster Groves, Mo., a corporation of Missouri. Filed May 29, 1925. Serial No. 33,832. Two claims. (Cl. 196—4).

2. A process for breaking petroleum emulsions, characterized by subjecting the emulsion to the action of a demulsifying agent and bringing the emulsion to an incipent break without dilution, and thereafter adding fresh or untreated emulsion to the treated emulsion after it has reached the incipient break.

1,596,592. Process for Treating Petroleum Emulsions. Melvin De Groote, St. Louis, Mo., assignor to William S. Barnickel & Co., Webster Groves, Mo., a corporation of Missouri. Filed October 1, 1925. Serial No. 59,591. Two claims. (Cl. 196—4).

1. A process for treating petroleum emulsions, characterized by subjecting the emulsion to the action of a water insoluble soap obtained from a shale oil sludge.

(Additional Patents on Page 150)

Oil Securities Active But Irregular

Union Tank Car Advances to 120, a New High. L. J. Drake, President of Galena Signal Co., Elected President. Dividend News.

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York City

NEW YORK, Sept. 20.—Oil securities were active and irregular during the past week. Union Tank was one of the strongest features advancing to 120, a new high. National Supply continued active at its highest levels. An early crude cut was expected in some quarters and was given as the reason for the failure of the oil securities to hold recent gains.

Union Tank Car.

Union Tank Car common advanced to 120, a new high record for the year, and up nearly 30 points in the past few weeks. It was reported that the company planned to retire its preferred stock with money to be raised from the sale of equipment trust notes. The company recently moved its main office from New York to Chicago, involving the removal of approximately 75 families. This step was taken with a view to bringing the administration direct to the railroad center of the country.

Union Tank Car Co. is the largest owner of petroleum tank cars. General American Tank Car Corp., whose main office also is in Chicago, is the largest maker of tankcars. Union has generally purchased its cars from various manufacturers, having never engaged on an important scale in the manufacture of cars itself.

In view of the growth of the tankcar business, it is thought in some quarters that a merger, or working agreement, between Union Tank and General American Tank is imminent. It has been impossible to confirm this, but the step would obviously be of great benefit to both companies. If a merger takes place it is believed a new company will be formed to acquire the assets of both companies.

L. J. Drake, president Galena Signal Oil Co., has been elected president of the Union Tank Car Co., to succeed S. I. Sicardi. Mr. Drake will resign shortly from the Galena company.

Oil Well Supply

Better buying of Oil Well Supply common stock has appeared, indicating recognition of the company's favorable earnings and financial position. Earnings for the first half of 1926 of $929,532, equivalent to $2.11 a share of the common stock, compare with $817,870, or $1.46 a share, in the corresponding period of 1925. The common dividend for the entire year 1926 was more than earned in the first six months.

Developments in the oil industry point to increased operations in this country and abroad in drilling and pipeline construction, as well as other phases of activity calling for equipment handled by the supply companies. The foreign field has been brought into greater relief by the Oil Conservation Board report, and it is agreed that the future of foreign development is practically unlimited.

About a year ago the original $1,500,000 capital of Oil Well Supply Co. was exchanged for the present capitalization and an initial dividend of 50 cents quarterly paid on the new $25 par common January 2, last. It is believed extra dividends will be declared as earnings warrant.

The company's surplus as of June 30, 1926, after deducting deferred charges of $191,427, indicated a book value of $52.50 a share on the $25 par common stock of $25 par value. The balance sheet as of June 30, 1926, showed current assets of $24,243,070, nearly five times current liabilities of $4,923,768. Against land, buildings, machinery and equipment of $12,385,395, depreciation of $5,691,548 was charged, leaving net value of $6,693,847. Bonded debt consists of $1,950,000 first mortgage bonds maturing $150,000 annually to 1939.

Trinidad Oil Fields, Inc.

Trinidad Oil Fields, Inc., has been formed by American interests, with British associates, and has taken over some 27,000 acres of valuable oil properties on the Island of Trinidad. Over 12,000 acres are proven or semiproven oil lands. An aggressive drilling campaign has been laid out and has already started. It is understood that close relations exist between this company and General Asphalt Co. and certain British companies.

William Warfield, formerly manager of the foreign producing department of the Standard Oil Co. of New Jersey, is president, and Huntington Jackson & Co., the bankers. Among the directors are Frank Seamans, vice president, General Asphalt Co.; Harry Arthur, vice president, American International Corp.; Lord Arundell of Wardour, and Walter McLachlan, chairman of the Apex Trinidad Oil Fields, Ltd., of London. Percy A. Rockefeller is said to be intimately connected with the company and may later become a director.

Williams Oil-O-Matic

Williams Oil-O-Matic Heating Corp. reports August net earnings of $119,402 after taxes and for the first 10 months of 1926 net earnings of $581,746. The company has outstanding 370,000 shares of no par value stock.

California Petroleum

The California Petroleum Corp. and subsidiaries report for the six months ended June 30, 1926, consolidated net profit of $3,578,065, after depreciation, depletion, interest, Federal taxes, etc., equivalent to $1.88 a share earned on 1,901,962 shares of common stock. This compares with $3,187,235 or $1.67 a share on the above share basis, in the first half of 1925. Net income for the June quarter of 1926 was $2,331,180, compared with $1,246,885, in the preceding quarter, and $2,081,495 in the second quarter of the previous year.

The consolidated income account for the six months ended June 30, 1926, compares as follows:

	1926	1925
Gross earnings	$15,596,628	$10,813,531
Operating expenses	7,299,701	3,880,010
Net	$ 8,296,927	$ 6,933,521
Depr., depl., etc.	2,908,798	1,494,758
Devel. expense, etc.	1,157,726	1,650,913
Interest	288,008	295,715
Fed. tax reserve	364,330	304,900
Net profit	$ 3,578,065	$ 3,187,235
Pfd. dividends	... ...	415,629
Common divs.	1,866,627	608,195
Surplus	$ 1,711,438	$ 2,163,411

The report states that the company has 5,575,000 bbls. of oil in storage.

British Controlled

Weakness in stock of British Controlled Oilfields in the London market is attributed to disappointment over the report of the directors showing $30,000,000 of the company's $50,000,000 capital spent, and recommending drastic reorganization. Five directors, including the chairman, are resigning.

Crystal Oil Refining

The Crystal Oil Refining Corp. reports for the period from Feburpary 27, 1926, to August 31, 1926, net profit of $172,279 after interest, depreciation and Federal taxes, equivalent after allowing for 6 per cent preferred dividends to 93 cents a share earned on the outstanding 102,952 shares of no par common stock.

The income account for the period February 27 to August 31, 1926, follows:

Gross income	$4,052,127
Expenses and ord. taxes	3,754,415
Operating profit	$ 297,712
Interest	11,358
Depreciation	90,000
Est. Federal taxes	24,075
Net profit	$ 172,279

The Crystal Oil Refining Corp. is successor to the Caddo Oil & Refining Co.

Dividends

The British American Oil Co., Ltd., declared a regular quarterly dividend of 62½ cents a share, payable October 1 to stockholders of record September 17.

Amerada Corporation declared a regular quarterly dividend of 50 cents a share on the common stock, payable October 30 to stockholders of record October 15.

The Mountain & Gulf Oil Co. has declared an extra dividend of 1 per cent and regular quarterly dividend of 2 per cent, payable October 15 to stockholders of record October 1.

The West Coast Oil Co., a subsidiary of Associated Oil, has declared an extra dividend of $5 and regular quarterly dividend of $1.50 on the preferred, payable October 5 to stockholders of record September 25. The company paid an extra of $8.50 in July.

The Sterling Oil & Development Co., a subsidiary of Associated Oil, declared an extra dividend of 10 cents a share and regular semiannual dividend of 10 cents on the common, payable October 5 to stockholders of record September 25. The company paid an extra of 10 cents in April.

CONTINENTAL REFINERY PLANS

OIL CITY, Pa., Sept. 18.—Continental Refinery Co. plans to spend $150,000 for immediate improvements. Modern distilling equipment costing $80,000 will be installed, and $70,000 to $75,000 will be spent for Sharples centrifugal plant.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. Sept. 20	Clos. Quot. Sept. 13	1926 High	1926 Low	1925 High	1925 Low	1924 High	1924 Low
Amerada Corp.	..	31⅜	30⅝	32⅜	21⅜	...	...	...	...
Atlantic Ref., com.	100	110⅜	112	128⅜	97	117½	95⅛	140⅛	78⅛
Barnsdall "A"	25	26⅝	27⅜	33⅛	23½	33½	18⅜	29½	14
California Pet., com.	25	32⅛	32⅝	38⅛	30⅝	34⅝	23⅜	29	19⅝
Houston Oil	100	56	60¼	72	50¼	85	53	82½	61
Independent Oil & Gas	..	25⅝	25⅜	34	20¼	41¾	13½	16½	5⅜
Indian Refining	10	8⅜	9	13⅜	9½	14¼	5½	7	3⅝
Lago Oil & Trans.	..	20⅜	21	24½	19¼	...	...	...	...
Louisiana Oil	10	15¼	15⅜	19⅝	12	23⅜	13⅜	...	...
Maracaibo	..	21⅜	22⅜	28⅜	20⅜	35½	20⅜	37¼	25⅜
Marland	..	56½	58½	63⅜	49¼	69¼	35⅜	42	20
Mexican Seaboard	..	10⅜	•11	13⅜	6	22⅜	9	26⅜	14⅛
Mid-Continent Pet.	..	31⅜	31⅜	41	25⅝	38	25⅜	40¼	22⅝
National Supply	50	70	69¾	71	55½	71	54⅜	72⅛	54
Oil Well Supply	..	•33½	35½	36	30	38	33⅜	...	...
Pan. Amer., B	50	66½	67¼	76⅜	56⅛	84⅞	59½	65	44½
Pan. Amer., Western B.	..	35⅞	35⅝	46	34	49⅜	37¼	...	...
Phillips Pet.	..	49⅝	50½	52⅜	42½	47⅛	36¼	52¼	28½
Producers & Refiners	50	13½	•13	17½	11	32⅜	12½	32½	29⅜
Pure Oil, com.	..	26½	27	31	25⅜	33⅜	25¼	30¼	20
Royal Dutch, N. Y., sh.	13.40	51⅜	50⅜	57⅜	49⅜	54⅝	48¼	69½	40⅜
Shell Transport	10	•43	•43	48⅜	42	49	39⅜	42	33
Shell Union, com.	..	28⅜	29¼	30⅜	24	28⅜	21⅝	22½	15⅜
Simms Pet.	10	18½	18¼	28⅝	16⅛	28½	17⅜	24	10⅜
Sinclair Consolidated, com.	..	20⅜	21	24⅞	19⅜	24⅞	17	17½	15
Skelly Oil	25	33⅜	34½	37⅛	27	32½	21⅜	29	17⅛
Standard of California	25	60⅞	61¼	63½	54	67¼	51⅝	68½	55½
Standard of New Jersey, com.	25	42⅝	43⅜	46⅝	36½	47½	38⅞	41½	33
Sun Oil Co.	..	•34	33	41⅝	30½	43⅜	38⅛	...	...
The Texas Company	25	54⅛	54½	58	48	55	42⅜	45⅝	37⅜
Texas Pacific Coal & Oil	10	15	15⅛	19⅛	12⅛	23⅜	11	15¼	8¼
Tide Water Oil	25	30	30¼	39¼	30⅛	...	...	...	...
Transcontinental	..	4⅜	4½	5½	3	5⅝	3½	6½	3⅝
Union Oil of California	25	51⅝	51⅜	58	37¼	43⅝	33⅛	39	35½
Union Tank, com.	100	115¼	114⅝	120	84¼	1134	118	132⅞	94
White Eagle Oil & Refining	..	26½	26¼	29¾	25¼	31⅜	25⅝	29⅝	23⅛
Standard Oils									
Anglo-American Oil	£1	18¼	18⅜	19⅜	16⅛	26⅜	17⅛	18⅜	14⅝
Borne Scrymser	100	295	•290	295	226	240	205	164	150
Buckeye Pipe Line	50	46½	47¼	59½	47⅝	72	63½	85⅛	51
Chesebrough Mfg. Co.	25	73	•73½	72⅜	63	74	48¼	62½	29¼
Continental	10	20¼	20½	25⅝	19¼	31¼	21⅜	...	...
Crescent Pipe Line	25	•15½	•15½	16	14⅛	17½	10	20	11⅜
Cumberland Pipe Line	100	109	•109½	137	108	156	128	148	108
Eureka Pipe Line	100	•48	•47	63⅜	47⅜	96	61¼	165	74
Galena Signal com.	100	17	16⅜	32½	17¼	68½	23⅛	69⅜	62½
Humble Oil & Refining Co.	25	58⅛	59½	68⅛	52	99	42½	43⅜	36
Illinois Pipe Line	100	135½	•124	144	131	154½	124	161	123
Imperial Oil, Ltd.	..	36	36⅜	38⅜	32½	39⅛	27¼	119	99
Indiana Pipe Line	50	60	•58	68	58	84	87½	100	66
International Pet. Co.	10	33	33½	35¼	28⅜	25⅝	22¼	34⅜	16⅞
National Transit Co.	12.50	•14	14¼	20⅜	14½	25½	16½	25⅞	20⅝
New York Transit	100	•31	•33	51½	33¼	79	50	57	54½
Northern Pipe Line	100	•69	70	80½	68	88	67⅛	107½	72
Ohio Oil Co.	25	58⅞	60	67¾	55⅜	75¼	60	79½	53
Penn.-Mex. Fuel	25	•18⅛	•18⅛	24¼	15	44	19	35⅝	27
Prairie Oil & Gas	25	51	52⅜	60¼	48	65½	45⅜	269	193
Prairie Pipe Line	100	•124	124½	127	122½	129⅜	105	111	100
Solar Refining Co.	100	•203	•203	212	184½	259	200	240	170
South Penn Oil	25	•37	37⅝	50	35	1197	139	176	117
Southwest Pa. Line	100	•51¼	•53	56	47½	84	50	89	68
Southern Pipe Line	50	24½	•24½	74½	61½	103	63	100	80½
Standard of Indiana	25	63½	64	70½	61⅝	70⅜	59½	69⅝	54¼
Standard of Kansas	25	•21	22¼	36½	21	46	30¼	50½	32½
Standard of Kentucky	25	121	124½	134⅜	108	137	114⅜	121⅞	101
Standard of Nebraska	25	46	•46	†51½	†42	270	231	262	198
Standard of New York	25	32⅛	32⅝	47¼	30⅝	48⅝	40	48	37⅜
Standard of Ohio, com.	100	298	•295	362	292½	369	338	337½	277
Swan & Finch, com.	25	•17½	•17½	21	18	27	12	28	20
Vacuum Oil	25	98⅝	98½	109⅜	94¼	109½	80½	83½	50½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	89	88½	95	82⅛	98¼	63½	67⅜	56
Tidewater Associated	...	23	24½	27	21	...	...	...	...

•Bid, no sales. ‡Old stock. †New stock.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Sept. 20	59.76	Aug. 16	59.34	July 12	59.43
Sept. 13	59.06	Aug. 9	59.35	July 2	59.38
Sept. 3	60.16	Aug. 2	59.76	June 28	60.17
Aug. 30	59.86	July 26	58.44	June 21	59.91
Aug. 23	59.06	July 19	59.45	June 14	59.40

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Sept. 21		Sept. 14		Sept. 7	
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.10½		.10⅝	.10¾	.10¾	.10⅞
56-58 450 end point	.10¼	.10¾	.10½		.10⅜	.10⅞
58-60 450 end point	.10⅜	.10½	.10½	.10⅝	.10⅞	.11⅛
58-60 437 end point (U. S. Motor)	.10½	.10⅞	.10⅝	.11	.11	.11⅜
60-62 400 end point	.11	.11¼	.11¼	.11⅜	.11⅝	.11¾
64-66 375 end point	.11½	.11⅝	.11¾	.12	.11⅞	.12
68 70 360 end point	.12	.12⅛	.12	.12⅛	.12	.12⅛
KANSAS—						
58-60 437 end point (U. S. Motor)	.11	.11¼	.11⅛	.11⅜	.11⅜	.11½
NORTH TEXAS—						
48-50 450 end point (Naphtha)	.10⅜	.10½	.10⅝	.10¾	.10⅝	.10¾
50-52 450 end point (Naphtha)	.10⅜	.10½	.10⅝	.10¾	.10⅜	
56-58 450 end point	.10⅛	.10⅜	.10¼	.10⅜	.10¾	.10⅞
58-60 437 end point (U. S. Motor)	.10⅜	.10⅝	.10½	.10⅞	.11	.11¼
60-62 400 end point	.10⅞	.11⅛	.11¼		.11½	.11⅝
64-66 390 end point	.11¼	.11⅜	.11⅝	.11⅝	.11⅝	.11⅞
64 66 375 end poin	.11⅜	.11½	.11⅝	.11⅞	.11⅞	.11⅞
68-70 360 end point	.12		.12	.12⅛	.12	.12⅛
NORTH LOUISIANA—						
58-60 437 end point (U. S. Motor)	.10⅞	.11	.11	.11¼	.11⅛	.11¼
ARKANSAS—						
58-60 437 end point (U. S. Motor)	.10⅞	.11⅛	.11	.11¼	.11¼	.11½
ROCKY MOUNTAIN STATES—						
*58 60 437 end point (U. S. Motor)	.13½	.13¾	.13⅝	.14	.14	.14½
PENNSYLVANIA—						
52 Naphtha	.12½	.12¾	.12½	.12¾	.12¼	.12½
54 Naphtha	.12¾	.13	.12¾	.13	.12½	.12⅝
56 Gasoline	.13	.13¼	.13	.13¼	.12⅝	.12⅞
58 Gasoline	.13¼	.13½	.13¼	.13½	.12⅞	.13
60 Gasoline	.13½	.13¾	.13½	.13⅝	.13½	.13¾
62 Gasoline	.14½	.14¾	.14½	.14¾	.14¼	.14½
64 Gasoline	.14¾	.15	.14¾	.15	.14½	.14⅞
66 Gasoline	.15¾	.16	.15¾	.16	.15½	.15¾
68-70 Gasoline	.17¾	.18	.17¾	.18	.17½	.17¾
CALIFORNIA—						
54-58 437 end point (U. S. Motor) domestic	.12	.12½	.12	.12½	.12	.12½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 end point (Naphtha)	.10½		.10¾		.10¾	.11
56-58 450 end point	.10¼	.10½	.10½	.10⅝	.10¾	.11
58-60 437 end point (U. S Motor)	.10⅜	.11	.11		.11¼	.11⅜
60-62 400 end point	.11¼	.11½	.11½	.11⅝	.11½	.11¾
64-66 375 end point	.11⅜	.12	.11⅞	.12	.11¾	.12
68-70 360 end point	.12	.12¼	.12¼		.12¼	

*Colorado points.

NATURAL GASOLINE

	Sept. 21		Sept. 14		Sept. 7	
OKLAHOMA (Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.10¼		.10¼	.10⅜	.10¼	
Grade A, 72-79.9, 375 e.p., rec. 90%	.10¼		.10¼	.10⅜	.10¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.10	.10⅛	.10⅛	.10¼	.10	.10⅛
Grade B, 76-83.9, 375 e.p., rec. 85%	.10	.10⅛	.10⅛	.10¼	.10	.10⅛
Grade C, 80-90, 375 ep., rec. 78%	.09¾	.09⅞	.09⅞	.10	.09¾	.10
NORTH TEXAS—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.10¼		.10¼	.10⅜	.10⅛	.10⅜
Grade A, 72-79.9, 375 e.p., rec. 90%	.10¼		.10¼	.10⅜	.10⅛	.10⅜
Grade BB, 84-92, 375 e.p., rec. 85%	.10	.10⅛	.10⅛	.10¼	.10	.10⅛
Grade B, 76-83.9, 375 e.p., rec. 85%	.10	.10⅛	.10⅛	.10¼	.10	.10⅛
Grade C, 80-90, 375 e.p., rec. 78%	.09¾	.10	.10		.09¾	.10
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.10¾	.11	.10¾	.11	.10⅝	.10¾
Grade B, 76-83.9, 375 e.p., rec. 85%	.10⅝	.10¾	.10⅝	.10¾	.10½	.10⅝
Grade C, 80-90, 375 e.p., rec. 78%			.10½	.10⅝	.10⅜	.10½
CALIFORNIA—						
75-85, 375-390 end point	.15½	.16	.15½	.16	.15½	.16
CHICAGO DISTRICT (Based on Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.10¼	.10⅜	.10¼	.10⅜	.10	.10¼
Grade A, 72 79.9, 375 e.p., rec. 90%	.10¼	.10⅜	.10¼	.10⅜	.10	.10¼
Grade BB, 84-92, 375 e.p., rec 85%	.10	.10⅛	.10	.10¼	.09¾	.10
Grade B, 76-83.9, 375 e.p., rec. 85%	.10	.10⅛	.10	.10¼	.09¾	.10
Grade C, 80-90, 375 e.p., rec. 78%	.09¾	.09⅞	.09¾	.10	.09¾	

MOTOR NATURAL GASOLINE

	Sept. 21		Sept. 14		Sept. 7	
OKLAHOMA (Group 3)—						
60-62 450 end point	.10¼		.10⅜	.10½	.10½	.10¾
64-66 437 end point	.10¼	.10⅜	.10⅝	.10¾	.10¾	.11
NORTH TEXAS—						
64-66 437 end point	.10¼		.10½	.10¾	.10¾	
PENNSYLVANIA—						
*60-62	.13	.13¼	.13	.13¼	.13	.13¼
*64-66	.13¼	.13½	.13¼	.13½	.13¼	.13½
*66 68	.13½	.13¾	.13½	.13¾	.13½	.13¾
*68-70	.13½	.13¾	.13½	.13¾	.13½	.13¾
CHICAGO DISTRICT (Based on Group 3)—						
60-62 450 end point	.10¼		.10¼		.10½	.10¾
64-66 437 end point	.10½		.10½		.10¾	

*At Sistersville, W. Va.

BURNING OIL

	Sept. 21		Sept. 14		Sept. 7	
KANSAS—						
41-43 water white Kerosene	.09	.09¼	.09⅜	.09⅝	.09⅝	.09¾
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.08⅝	.08¾	.09¼	.09½	.09½	.09⅝
42-44 water white Kerosene	.09¼	.09½	.09⅞	.10	.09⅞	.10⅛
NORTH LOUISIANA—						
41-43 prime white Kerosene	.09¼	.09½	.09½	.09¾	.09½	.10
ROCKY MOUNTAIN STATES—						
*40-41 water white Kerosene	.11⅝	.11¾	.12¼	.12½	.12½	.12¾
NORTH TEXAS—						
41-43 water white Kerosene	.08¼	.08½	.09⅛	.09¼	.09⅜	.09½
ARKANSAS—						
41-43 water white Kerosene	.09¼	.09½	.09½		.09½	
PENNSYLVANIA—						
43 Kerosene prime white	.09¾	.10	.09¾	.10	.09¾	.10
45 Kerosene water white	.10	.10¼	.10¼	.10½	.10¼	.10½
46 Kerosene water white	.10¾	.11	.11	.11¼	.11	.11¼
47 Kerosene water white	.11	.11¼	.11¼	.11½	.11¼	.11½
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom Neutral	.08½	.08¾	.08½	.08¾	.08½	.08¾
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
300 Mineral Seal	.08¼	.08½	.08¼	.08½	.08¼	.08½
CALIFORNIA—						
38-40 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.09¾	.10	.09¾	.10	.09¾	.10
Engine distillate, 42-44 480 end point	.09¼	.09½	.09¼	.09½	.09¼	.09½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.08¾	.09	.09½		.09½	.09¾
42-44 water white Kerosene	.09½	.09¾	.10	.10¼	.10	.10¼

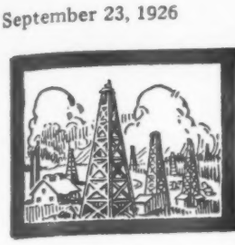
*Colorado points.

FUEL OILS

	Sept. 21		Sept. 14		Sept. 7	
KANSAS—						
24-26 Fuel Oil	1.50	1 55	1.55	1.60	1.60	1.65
32-36 Gas Oil	.04⅝	.04¾	.04⅝	.04¾	.04⅝	.04¾
38-40 Distillate	.05⅞	.06	.05⅞	.06	.05⅝	.05⅞
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.30	1.32½	1.32½	1.35	1 35	1.40
22-26 Fuel Oil (sellers' cars)	1.35		1.37½	1.40	1.40	1.45
24-26 Fuel Oil (sellers' cars)	1.40	1.42½	1.45	1.47½	1.47½	1.50
26-30 Fuel Oil (sellers' cars)	1.50	1.55	1.60		1 60	1.65
28-30 Fuel Oil (sellers' cars)	1.57½	1.60	1.65	1.70	1.70	1.75
32-36 Gas Oil (cracking stock)	.04¼	.04⅜	.04¼	.04½	.04¼	.04½
36-38 Distillate	.05⅜	.05⅝	.05¼	.05½	.05¼	.05½
38-40 Straw Distillate	.05⅝	.05⅞	.05½	.05⅝	.05½	
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.45	1.47½	1.50		1.50	1.52½
32-36 Gas Oil (straw)	.04¼	.04¼	.04¼	.04½	.04⅜	.04½
38-40 Straw Distillate	.05⅜	.05⅝	.05¼	.05½	.05¼	.05½
NORTH LOUISIANA						
18-20 Fuel Oil	1.35		1.35	1.40	1.35	1.40
32-36 Gas Oil (straw)	.04¾	.05	.04¾	.05	.04¾	.05
32-36 Gas Oil (dark)	.04½	.04¾	.04½	.04¾	.04½	.04¾
36-38 Distillate	.05	.05¼	.05	.05¼	.05	.05¼
ARKANSAS—						
38-40 Distillate	.05½	.05¾	.05¼	.05½	.05½	
32-36 Gas Oil (straw)	.04½	.04¾	.04¾	.05	.04½	.04¾
16-20 Refinery Fuel Oil	1.25		1.25	1.30	1.27½	1.30
GULF COAST (South Texas)—						
Gas Oil	.05⅝	.05¾	.05⅝	.05¾	.05⅝	.05¾
Fuel Oil	1.75	1.85	1.75	1.85	1.75	1.85
PENNSYLVANIA—						
30 34 Fuel Oil	.05¾	.05⅞	.05¾	.05⅞	.05¾	.05⅞
36-40 Fuel Oil	.06½	.06⅝	.06½	.06⅝	.06½	.06⅝
CALIFORNIA						
33-36 Distillate	.04	.04¾	.04	.04¾	.04	.04¾
27-32 Distillate	.03¾	.04	.03¾	.04	.03¾	.04
15-20 Fuel Oil (at tide water)	1.00	1.04	1.00	1 04	1.00	1.04
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	1.42½	1.45	1.45	1.50	1.45	1.50
22-26 Fuel Oil (sellers' cars) Group 3	1.37½	1.42½	1.40	1 45	1.40	1.45
18-22 (Group 3)	1.35	1.37½	1.35	1.40	1.35	1.40
18-20 (Smackover)	1.25	1.30	1.25	1.30	1.25	1.30
32 36 Gas Oil	.04¼	.04⅜	.04¼	04⅜	.04¼	.04½
36-38 Distillate	.05½	.05⅝	.05¼	.05½	.05¼	.05½
38-40 Straw Distillate	.05⅜	.06	.05½	.06	.05½	.06

LUBRICATING OILS AND WAX

	Sept. 21		Sept. 14		Sept. 7	
OKLAHOMA (Group 3)—						
70-80 vis., 2½ color, 20-25 cold test	.06	.07	.06	.07	.06	.07
100 vis., 2 color, 20-25 cold test	.07	.07½	.07	.07½	.07	.07½
100 vis., 3 color, 20-25 cold test	.06½	.07	.06½	.07	.06½	.07
150 vis., 3 color, 20-25 cold test	.09½	.10	.09½	.10	.09½	.10
150 vis., 4 color, 20 25 cold test	.09¾		.09¾		.09¾	
180 vis., 3 color, 23-28 cold test	.10½	.11½	.10½	.11½	.10½	.11½
180 vis., 4 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
200 vis., 3 color, 23-28 cold test	.10¾	.12¼	.10¾	.12¼	.10¾	.12¼
200 vis , 4 color, 23-28 cold test	.11¼	.11½	.11¼	.11½	.11¼	.11½
220 vis., 3 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
220 vis., 3 color, 25-30 cold test	.13		.13		.13	
240 vis., 3 color, 25-30 cold test	.14	.15	.14	.15	.14	.15
240 vis., 4 color, 25 30 cold test	.14	.14½	.14	.14½	.14	.14½
280 vis., 3 color, 25-30 cold test	.16	.17	.16	.17	.16	.17
280 vis., 4 color, 25-30 cold test	.15½	.16½	.15½	.16½	.15½	.16½
180 vis., 5 color, 23-28 cold test	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
200 vis., 5 color, 23-28 cold test	.10	.11¼	.10	.11¼	.10	.11¼
220 vis., 5 color, 25-30 cold test	.12	.12¼	.12	.12¼	.12	.12¼
240 vis., 5 color, 25-30 cold test	.13	.14	.13	.14	.13	.14
280 vis., 5 color, 25-30 cold test	.15	.16	.15	.16	.15	.16
Cylinder Stocks:						
600, steam refined, dark green	.08	.11	.08	.11	.08	.11
600, steam refined, light green	.06	.07	.06	.07	.06	.07
150-200 vis. @ 210 "D" Bright Stock	.33	.35	.33	.35	.33	.35
150 vis., @ 210 "D" Bright Stock	.28	.31	.28	.31	.28	.31
200 210 vis. @ 210 "E" Bright Stock	.30	.31	.30	.31	.30	.31
150 vis. @ 210 "E" Bright Stock	.27	.28	.27	.28	.27	.28
Waxes:						
124-126 White Crude Scale Wax	.04¾		.04¾		.04¾	
PENNSYLVANIA—						
150, 3 color	.23¼		.23¼		.23¼	
180, 3 color	.26½		.26½		.26½	
200, 3 color	.29		.29		.29	
220, 3 color	.31		.31		.31	
600, steam refined	.12½		.12½		.13	
635, steam refined	.15½		.15½		.16⅞	
650, steam refined	.17¼		.17¼		.17½	
600, Pennsylvania flash	.21		.21		.23	
630, Pennsylvania flash	.32½		.32½		.32½	
*550, E filtered	.19		.19		.19	
600, E filtered	.21½		.21½		.20	
*600, E filtered	.21½		.21½		.20½	
600, D filtered	.27		.27		.27	
550, E filtered	.18		.18		.18	
550, D filtered	.22		.22		.22	



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

Pennsylvania Bright Stock	.41½		.41½		.41½	
122-124 White Crude Scale Wax	.05¼	.05⅜	.05¼	.05⅜	.05¼	.05⅜
†124-126 White Crude Scale Wax	.05½	.05¾	.05½	.05¾	.05½	.05¾

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.08½	.09	.08½	.09	.08½	.09
No. 3 color, 200 vis., pale oil	.11½	.12	.11½	.12	.11½	.12
No. 3½ color, 300 vis., pale oil	.12½	.13	.12½	.13	.12½	.13
No. 3¾ color, 500 vis., pale oil	.14	.14½	.14	.14½	.14	.14½
No. 4 color, 750 vis., pale oil	.17½	.18½	.17½	.18½	.17½	.18½
No. 2 plus color, 200 vis., pale filtered	.21½		.21½		.21½	
No. 2 color, 300 vis., pale filtered	.24½		.24½		.24½	
No. 2½ color, 500 vis., pale filtered	.27½		.27½		.27½	
No. 2½ color, 750 vis., pale filtered	.35½		.35½		.35½	
No. 5 to 6 color, 200 vis., red oil	.10	.10½	.10	.10½	.10	.10½
No. 5 to 6 color, 300 vis., red oil	.11½	.12	.11½	.12	.11½	.12
No. 5 to 6 color, 500 vis., red oil	.12½	.13	.12½	.13	.12½	.13
No. 5 to 6 color, 750 vis., red oil	.16½	.17	.16½	.17	.16½	.17
CALIFORNIA—						
130 vis., 2½-3 color	.10	.11½	.10	.11½	.10	.11½
200 vis., 2½-3 color	.13½	.14½	.13½	.14½	.13½	.14½
300 vis., 3 -3½ color	.15	.16	.15	.16	.15	.16
350 vis., 3½-4 color	.15½	.17½	.16½	.17½	.16½	.17½
400 vis., 3½-4 color	.18	.19	.18	.19	.18	.19
Red Neutrals:						
200 vis., 3½ 5 color	.12	.13	.12	.13	.12	.13
300 vis., 5 -6 color	.13	.14	.13	.14	.13	.14
400 vis., 5 -6 color	.15	.16	.15	.16	.15	.16
500 vis., 4½-5 color	.18	.19	.18	.19	.18	.19
500 vis., 6 -6½ color	.16	.17	.16	.17	.16	.17
600 vis., 6½ plus color	.17	.18	.17	.18	.17	.18

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Sept. 21	Sept. 14	Sept. 7
Gasoline:			
U. S. Motor, 58-60 437	.13	.13	.13
Export, 64-66 375	.15	.15	.15
Kerosene, prime white, 41-43	.11	.11	.11
*Bunker Oil "C" 14-16, per bbl.	1.75	1.75	1.75
*Diesel Oil, 28 30, per bbl.	2.50	2.50	2.50
Gas Oil, 28 plus	.06¾	.06¾	.06¾
Furnace Oil (tankwagon)	.12	.12	.11½
Cylinder Oil, light filtered, 600 s.r.	.29	.29	.29
Bright Stock, No. 5, 150 vis., at 212 F.	.42	.42	.42
White Neutral, No. 1, 170 vis., 1 color	.37	.37	.37
Spindle Oil, No. 1 red, 230 vis., 5½ color	.17½	.17½	.17½
Pale Oil, "25," 170 vis., 3½ color	.13	.13	.13
Pale Oil, "28," 100 vis., 2 color	.08	.08	.08
Red Oil:			
No. 3, 160 vis., 7 color	.11	.11	.11
No. 2, 212 vis., 5½ color	.12	.12	.12
No. 1, 265 vis., 5½ color	.13½	.13½	.13½
Polar, 295 vis., 6 color	.14	.14	.14
Paraffin Wax, refined:			
120-122 a.m.p., per lb.	.05⅞	.05⅞	.05⅞
125-127 a.m.p., per lb.	.06	.06	.06
130-132 a.m.p., per lb.	.06½	.06½	.06½
135-137 a.m.p., per lb.	.06¾	.06¾	.06¾
Petrolatum, in bbls., per lb.:			
Dark green	.01⅞	.01⅞	.01⅞
Amber	.03¼	.03¼	.03¼
Cream	.05⅜	.05⅜	.05⅜
Lily white	.07⅞	.07⅞	.07⅞
Snow white	.08¾	.08¾	.08¾

*Lighterage 5.5c a barrel extra.

NEW YORK CASE EXPORT PRICES

	Sept. 21	Sept. 14	Sept. 7
Gasoline, U. S. Motor, 58-60	.28.90	.28.90	.28.90
Kerosene:			
Standard white Kerosene	.19.65	.19.65	.19.65
Water white Kerosene	.21.15	.21.15	.21.15

LOS ANGELES EXPORT PRICES

	Sept. 21		Sept. 14		Sept. 7	
Kerosene water white	.05½	.06½	.05½	.06½	.05½	.06½
U. S. Motor Gasoline, 54-56 437 e.p.	.10	.10½	.10	.10½	.10	.10½

CRUDE OIL PRICES

OKLAHOMA, KANSAS AND NORTH TEXAS

***Prairie Oil & Gas Co.**
(Oklahoma, Kansas and North and East Central Texas)
(Effective May 15)

28° to 28.9°	$1.65
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° to 37.9°	2.37
38° to 38.9°	2.45
39° to 39.9°	2.53
40° to 40.9°	2.61
41° to 41.9°	2.69
42° to 42.9°	2.77
43° to 43.9°	2.85
44° to 44.9°	2.93
45° to 45.9°	3.01
46° to 46.9°	3.09
47° to 47.9°	3.17
48° to 48.9°	3.25
49° to 49.9°	3.33
50° to 50.9°	3.41
51° to 51.9°	3.49
52° and above	3.57

*Other major purchasers except as noted below.

Champlin Refining Co.
(Garber and Tonkawa)
(Effective May 15)

Schedule based on Prairie Oil & Gas Co. paying 10 cents additional for each grade of crude above 38° gravity.

Humble Oil & Refining Co.
(Effective May 15)

(North and East Central Texas, Ranger, Mexia, Powell, Richland, Wortham, Currie, Moran, Big Lake, Nacona and Lytton Springs)

Same prices as Prairie Oil & Gas Co. schedule. Postings below 28° gravity 8 cents less for each degree, effective June 21.

Magnolia Petroleum Co.
(Effective May 15)

Oklahoma, Kansas and North and East Central Texas, except Corsicana heavy, and Lytton Springs of South Central Texas)

Below 28°	$1.30
Other grades same as Prairie Oil & Gas Co.	
Iatan	$1.15
Corsicana heavy	1.25
Panola County:	
30° to 34.9°	$1.95
35° to 37.9°	2.10
38° and above	2.25

TEXAS PANHANDLE

Kay County Gas Co.
(Effective May 15)

28° to 28.9°	$1.35
29° to 29.9°	1.40
30° to 30.9°	1.45
31° to 31.9°	1.50
32° to 32.9°	1.55
33° to 33.9°	1.60
34° to 34.9°	1.65
35° to 35.9°	1.70
36° to 36.9°	1.75
37° to 37.9°	1.80
38° to 38.9°	1.85
39° and above	1.90

Humble Oil & Refining Co.
(Effective June 21)

39° to 39.9°	$1.90
40° to 40.9°	1.95
41° to 41.9°	2.00
42° to 42.9°	2.05
43° to 43.9°	2.10
44° and above	2.15

Grades below 39° gravity same as posted by the Kay County Gas Co.

Magnolia Petroleum Co.
(Effective September 14)

Below 34°	1.15
34° to 35.9°	1.25
36° to 37.9°	1.35
38° and above	1.45

WEST TEXAS

Crockett County (Aug. 11)

Below 26°	$1.20
26° to 26.9°	1.25
27° to 27.9°	1.30
28° to 28.9°	1.35
29° to 29.9°	1.40
30° to 30.9°	1.45
31° to 31.9°	1.50
32° to 32.9°	1.55
33° to 33.9°	1.60
34° to 34.9°	1.65
35° to 35.9°	1.70
36° and above	1.75

Crane-Upton Counties (Sept. 15)

Below 26°	$ .80
26° to 26.9°	.85
27° to 27.9°	.90
28° to 28.9°	.95
29° to 29.9°	1.00
30° to 30.9°	1.05
31° to 31.9°	1.10
32° to 32.9°	1.15
33° to 33.9°	1.20
34° to 34.9°	1.25
35° to 35.9°	1.30
36° and above	1.35

GULF COAST

***Humble Oil & Refining Co.**
(Effective August 30)

Grade A	$1.40
Grade B—	
Below 25°	1.40
25° to 25.9°	1.45
26° to 26.9°	1.50
27° to 27.9°	1.55
28° to 28.9°	1.60
29° to 29.9°	1.65
30° to 30.9°	1.70
31° to 31.9°	1.75
32° to 32.9°	1.80
33° to 33.9°	1.85
34° to 34.9°	1.90
35° and above	1.95
Spindletop	
Grade A	$1.25
Grade B—	
Below 25°	1.25
25° to 25.9°	1.30
26° to 26.9°	1.35
27° to 27.9°	1.40
28° to 28.9°	1.45
29° to 29.9°	1.50
30° to 30.9°	1.55
31° to 31.9°	1.60

*All major purchasers except as noted below. Sun Pipe Line Co. prices effective September 1.

The Texas Company
(Effective August 30)

Grade A	$1.40
Grade B	1.40
†Light Crude—	
35° to 35.9°	1.95
36° to 36.9°	2.00
37° to 37.9°	2.05
38° to 38.9°	2.10
39° to 39.9°	2.15
40° and above	2.20

†The Texas Company's postings on light crude under 35° gravity are same as Humble Oil & Refining Co.'s grades and prices for Grade B crude. Spindletop prices same as for Humble Oil & Refining Co., but classified according to The Texas Company's general schedule to 31° to 31.9° crude.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

***Magnolia Petroleum Co.**

Luling (contract) (Eff. May 18)	$1.30
Mirando (Webb, Jim Hogg and Zapata Counties) (May 15)	1.25
Rockdale-Minerva (Milam County)	1.25
Thrall	1.00
Calliham (Live Oak and McMullen Counties) (May 15)	1.75
§Lockhart (Lytton Springs)	
Somerset (Grayburg Pipe Line Co.): (Effective May 17)	
28° to 28.9°	$1.25
29° to 29.9°	1.35
30° to 30.9°	1.71
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.20
36° to 36.9°	2.29
37° to 37.9°	2.37
38° and above	2.45

*Texpata Pipe Line Co. and Humble Pipe Line Co. also post in Mirando Field.

§Lockhart prices same as for North and East Central Texas. Lockhart posted by Magnolia Petroleum Co. and Humble Oil & Refining Co.

ARKANSAS AND NORTH LOUISIANA

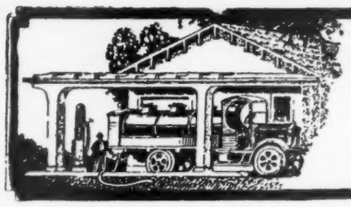
Standard Oil Co. of Louisiana
(Effective May 18)

Caddo:	
Below 26° (July 24)	$1.40
26° to 28.9° (July 24)	1.55
29° to 31.9° (July 24)	1.70
32° to 34.9°	2.25
35° to 37.9°	2.35
38° and above	2.45
Homer below 31°	1.85
31° to 32.9°	2.00
33° to 34.9°	2.10
35° and above	2.20
Haynesville below 33°	2.00
33° and above	2.10
El Dorado below 33°	2.00
33° to 34.9°	2.10
35° to 36.9°	2.20
37° and above	2.30
Bull Bayou, 32° to 34.9°	1.95
35° to 37.9°	2.10
38° and above	2.25
Cotton Valley	1.20
DeSoto	2.30
Crichton	2.10
Bellevue	1.40
Smackover, below 24°	1.10
24° to 24.9°	1.35
25° to 25.9°	1.40
26° to 26.9°	1.45
27° and above	1.50
*Stephens, Ark., below 26°	1.45
26° and above	1.65
†Calion (East El Dorado)	1.10
§Urania (August 26)	1.10

Other companies posting in these fields are: Gulf Pipe Line Co.; Atlantic Oil Producing Co. in Homer Haynesville, El Dorado and Smackover; The Texas Company in Caddo, Bull Bayou, DeSoto, Crichton and Smackover.

*Posted by the Atlantic Oil Producing Co. †Posted by the Gulf Pipe Line Co. §Posted by the Louisiana Oil Refining Corp.

(Continued on Page 142)



TANK WAGON MARKETS

Tankwagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, Sept. 21.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)
Main Service Station Price

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Chicago Dist.—				
†Less than 100 gals.	19.0	21.0	...	15.5

Tank wagon prices on April 19, 1922; g. up 1½c; May 8. up 1c; June 27. g. and k. up 1c; July 19. g. down 2c; k. down 1c; Oct. 10. g. down 2c; Oct. 21. g. down 1c; Feb. 5, 1923. g. up 1c; Feb. 20. g. up 1c; Aug. 14. g. down 6.6c; Oct. 4. k. down 1½c; Nov. 10. g. down 1.4c; Dec. 20. g. up 2c; Jan. 12, 1924. g. up 2c; k. up 1c; Feb. 5. g. up 2c, k. 1c; July 18. g. down 1c; July 30. g. and k. down 1c; Sept. 12. g. down 2c; Jan. 23, 1925. g. up 1c; Jan. 26. g. up 1c; Jan. 31. g. up 1c; Feb. 12. g. up 2c. k. up 1c; April 19. g. down 1c; July 14. g. up 1c; Aug. 25 g. down 2c. k. down 1c; Sept. 1. g. down. 1c; Feb. 4, 1926. g. up 1c; k. up 1c; April 16, 1926. k. up 1c; April 24, 1926. k. up ½c; April 29, 1926. g. up 1c. k. up ½c; May 6, 1926. k. up ½c; May 17. g. and k. up 1c; July 1. k. down 1c; July 3. k. down 1c; Aug. 13. k. up 1c; Aug. 24. k. up 1c.

Decatur, Ill.	19 2	21 2	...	16 0
E. St. Louis	18 1	20.35	...	15 1
Joliet	19 4	21.4	...	16 2
Peoria	19 2	21 2	...	16 0
Quincy	19.2	21.2	...	15 8
Davenport, Ia.	21 5	23.5	2 0	16 4
Des Moines	21.5	23 5	2 0	16 4
Keokuk	21 5	23.5	2 0	16 4
Sioux City	18.9	20.9	2.0	16.0
Duluth, Minn.	22 5	24.5	2.0	17 1
Minneapolis	22.6	24.2	2.0	17.1
La Crosse, Wis.	22 2	24.2	2 0	16.9
Milwaukee	21 1	23 1	2 0	15 8
Madison	21 3	23 3	2 0	16.0
Detroit, Mich.	21.8	23.8	2 0	16 7
Grand Rapids	21 7	23 7	2 0	16.6
Saginaw	21 9	23 9	2 0	16 8
Evansville, Ind.	22 0	24.0	3 0	16 0
Ft. Wayne	22 4	24 4	3 0	15 4
Indianapolis	22.2	24.2	3 0	16 2
South Bend	22.4	24.4	3.0	16.4
Fargo, N. D.	23 9	25 9	2 0	19 1
Huron, S. D.	23 5	25 5	3.0	17 6
Sioux Falls	22.0	24 0	3 0	17 1
*K. C., Mo.	21 9	23 9	3.0	14.8
*Springfield	21 8	23 8	3 0	15 7
*St. Louis	21 6	22 9	2 5	15 5
*St. Joseph	21 0	23 0	2 5	15 4
†Wichita, Kan.	19 8	21.8	2.0	15.3
Bartlesville, Ok.	20 8	22 8	3 0	15 3

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	21.0	15.0
V. M. & P. naphtha	23 0	16 5
Cleaners naphtha	21 0	17 5

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

*State tax is 2c. Remainder is city tax.
†Quantity price on more than 100 gallons. 18.0.
‡At all Kansas points a discount of 1 cent a gallon is allowed from the tankwagon postings on dumps of 50 gallons or more.

The following monthly rebate system is effective on tankwagon schedules throughout the territory of Standard Oil Co. of Indiana: Over 750 gallons, ½c; over 2,000 gallons, ¾c; over 3,000 gallons, 1c; over 6,000 gallons 1½c; over 10,000 gallons, 2c. If quantity bought during the year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 2,400 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

STANDARD FURNACE OIL
(Standard Oil Co. of Indiana)

Less than 100 gallons	10 0
100 to 399 gallons	9 5
400 or more gallons	9.0

SOUTHWESTERN DISTRICT

***Magnolia Petroleum Co.**

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Dallas, Tex.	†17.0	17.0	1.0	15.0
Fort Worth	†17.0	17.0	1.0	15.0
Houston	†21.0	21.0	1.0	15.0
San Antonio	†19.0	19.0	1.0	15.0
El Paso	†21 0	21 0	1 0	15 0
Texarkana	†21 0	21.0	1.0	15 0
Muskogee, Ok.	20.0	23.0	3.0	15.0
Oklahoma City	18.0	21.0	3.0	15.0
Tulsa	20.0	23.0	3.0	15.0
Little Rock	22 0	25 0	4 0	15 5
Ft. Smith, Ark.	22.0	25.0	4 0	15 5

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, ½c; over 2,000 gallons, ¾c; over 3,000 gallons. 1c; over 4,500 gallons, 1¼c; over 6,000 gallons, 1½c; over 8,000 gallons, 1¾c; over 10,000 gallons, 2c. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1c; over 300 gallons a month, 1¼c; over 400 gallons, 1½c; over 500 gallons a month, 1¾c; over 600 gallons, 2c. The same rule applies for annual purchases as in the tankwagon discounts.

†Magnolia maintains only a retail schedule in Texas with dealers and large consumers allowed a flat 2-cent discount, except at El Paso where the discount is only 2 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
*New Orleans	20 5	23 5	3 0	16 0
Alexanderia	20 0	23 0	2 0	17.0
Baton Rouge	19.0	22 0	2 0	15.5
LaFayette	20.0	23 0	2 0	16 5
Lake Charles	20 5	23 5	2 0	17 5
Shreveport, La.	19 0	22 0	2.0	16 0
Memphis, Tenn.	20 0	23 0	3 0	17 0
Chattanooga	23 5	26.5	3 0	17 5
Knoxville	23 5	26.5	3 0	18 0
Nashville	21 0	24 0	3 0	18.0
Bristol	24 0	27 0	3 0	17.5
Little Rock Ark	22.0	25 0	4 0	16 0

*Tax of 3c includes city tax of 1c.
*Louisiana kerosene prices include 1-cent State tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Atlanta, Ga.	25.0	28 0	3 5	19 0
Augusta	25 0	28 0	3 5	19 0
Macon	25 0	28 0	3 5	19 0
Savannah	23 0	25 0	3 5	17.0
Birm'ghm, Ala.	22 0	25.0	2 0	18 5
Mobile	21 0	24 0	2 0	17 0
Montgomery	23 0	26 0	3 0	19 5
Clarksdale, Miss	23.0	26.0	4.0	15.5
Jackson	23 0	26 0	4 0	16.5
Natchez	22 5	25 5	4 0	16 0
Vicksburg	22 5	25 5	4.0	16 0
Jack'ville, Fla.	23 0	26 0	4 0	17 0
Miami	25.0	28 0	4 0	18 5
Pensacola	23 0	26 0	4 0	17 5
Tampa	23 0	26 0	4.0	17 0
Covington	24 0	27 0	5 0	18 0
Louisville	24 0	27 0	5 0	17 0
Lexington, Ky.	25 0	28 0	5 0	18.0

In addition to the state tax of 2c on gasoline, Montgomery has city tax of 1c on gasoline and ½c on kerosene. Prices in Georgia include ½c inspection fee on gasoline and kerosene; in Florida, an inspection fee of 0.125c; in Alabama, an inspection fee of ½c on kerosene only.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Denver, Colo.	22 0	22 0	2.0	18 0
Pueblo	22 0	24 0	2 0	18 0
Grand Jct.	26.0	28.0	2.0	22.0
Casper, Wyo.	22 5	24 5	2.5	16 5
Cheyenne	23.5	25 5	2 5	18 0
Butte, Mont.	24 0	24 0	2 0	20 5
Helena	26.0	28 0	2 0	20 5
Salt Lake, Utah	26 0	28 0	3.5	19 0
Boise, Idaho	27 0	29 0	3 0	21 0
Albuquerque, N. Mex.	28 5	28 5	3 0	20.0

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Atlantic City	19 0		...	17 0
Newark, N. J.	19 0	21 0	...	17.0
Annapolis, Md.	21 0		2 0	17 0
Baltimore	21 0	24 0	2 0	17 0
Cumberland	21 0	24.0	2.0	17 0
Washington	21 0	24 0	2 0	17.0
Danville, Va.	23 5	...	4 5	17 0
Norfolk	23.5	26 5	4 5	17 0
Petersburg	23 5	26 5	4.5	17.0
Roanoke	23 5	26.5	4.5	17 0
Richmond	23 5	26 5	4.5	17 0
Charleston, W. Va.	21 5	24 5	3 5	17 0
Keyser	22 5		3.5	17 0
Parkersburg	21 5	24.5	3.5	17 0
Wheeling	21 5	24 5	3.5	17 0
Charlotte, N. C.	23 5	26 5	4 0	17 0
Hickory	23 5	...	4 0	17 0
Mt. Airy	23 5	26 5	4.0	17.0
Salisbury	23 5	26.5	4 0	17 0
Charleston, S.C.	24 5	27 5	5 0	17 0
Columbia	24 5	27 5	5 0	17.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Albany, N. Y.	17.0	....	...	18 0
*New York	21 0	....	...	18.0
Buffalo	20 0	....	...	18 0
Rochester	20.0	....	...	16.0
Syracuse	21 0	....	...	18 0
Boston, Mass.	21 0	....	...	18 0
Augusta, Me.	24 0	....	3 0	18 0
Manchester, N. H.	23 0	....	2 0	18 0
Burlington, Vt.	23 0	....	2 0	18.0

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 to 3 cents higher than tankwagon price.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Omaha	21.25	23 25	2 0	16.0
McCook	22 75	24 75	2 0	17 5
Norfolk	21 75	23.75	2 0	16 5
N. Platte	22 75	24.75	2 0	17 25
Scottsbluff	22 25	24.25	2 0	16.75

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
San Francisco	18.0	22 0	2 0	15 5
Los Angeles	16 5	20 5	2 0	15 0
Fresno	18.5	22.5	2.0	17.5
Reno, Nev.	23 5	27 5	4 0	19.0
Portland, Ore.	19.0	23 0	3 0	16 5
Seattle, Wash.	18.0	22 0	2 0	16 5
Spokane	22 0	26.0	2 0	20 5
Tacoma	18 0	22 0	2.0	16 5
Phoenix, Ariz.	25 0	28 0	3.0	21.5

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
*Pittsburgh, Pa	20 0	25 0	...	17 0
*Philadelphia	20 0	25 0	...	17.0
*Scranton	20 0	25 0	...	17 0
*Allentown	20 0	25 0	...	17 0
Altoona	20.0	25 0	...	17.0
*Erie	18 0	23 0	...	16.0
Dover, Del.	22 0	25.0	2.0	17 0
Wilmington	22.0	25 0	2.0	17 0
Spring'd, Mass.	21 0	23 0	...	18 0
Worchester	21.0	23 0	...	18 0
Boston	21 0	23 0	...	18 0
Providence, R.I.	22 0	24 0	1 0	18 0
Hartford, Conn.	23.0	26.0	2 0	17.0
New Haven	23 0	26 0	2 0	18.0

*Pennsylvania tax of 2c is collected by the dealer and paid by him direct to the State.

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
All Ohio points	22.0	24.0	2.0	17.0

CALIFORNIA CRUDE PRICES
***Standard Oil Co.-Union Oil Co.**
(Effective March 11)

Gravity—	Long Beach Huntington Beach Richfield Brea-Olinda Rosecrans-Dom'guez Torrance-Inglewood	Whittier La Habra Montebello	Kern River Newhall McKittrick Midway-Sunset Elk Hills Lost Hills Belridge	Coyote	Santa Fe Springs	Coalinga	Wheeler Ridge	Santa Maria Ventura Salt Lake
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.87	.86	.75	.85	....	.75	.76	.85
16°	.90	.85	.75	.85	....	.75	.75	.85
17°	.94	.85	.75	.85	....	.75	.75	.85
18°	.98	.86	.75	.86	....	.75	.76	.85
19°	1.04	.87	.75	.87	....	.75	.75	.85
20°	1.10	.89	.82	.90	.89	.79	.78	.90
21°	1.16	.91	.90	.98	.91	.86	.81	.97
22°	1.22	.94	1.00	1.06	.94	.93	.85	1.04
23°	1.28	.97	1.11	1.14	.97	1.00	.89	1.11
24°	1.34	1.01	1.22	1.22	1.02	1.07	.93	1.18
25°	1.40	1.05	1.33	1.30	1.08	1.14	.97	1.25
26°	1.46	1.09	1.44	1.38	1.16	1.21	1.01	1.32
27°	1.52	1.13	1.55	1.46	1.24	1.28	1.05	1.39
28°	1.58	1.17	1.66	1.54	1.32	1.36	....	1.46
29°	1.64	1.21	1.77	1.62	1.40	1.42	....	1.53
30°	1.70	1.25	1.88	1.70	1.48	1.49	....	1.60
31°	1.76	....	1.99	....	1.60	1.56	....	1.67
32°	1.84	....	2.10	....	1.72	1.63	....	1.73
33°	1.92	....	2.21	....	1.84	1.70	....	1.79
34°	2.00	....	2.32	....	1.96	1.77	....	1.85
35°	2.08	....	....	....	2.08	1.84	....	1.92
36°	2.16	....	....	....	2.16	....	....	....
37°	2.24	....	....	....	2.24	....	....	....
38°	2.34	....	....	....	2.34	....	....	....
39°	2.44	....	....	....	2.44	....	....	....
40°	2.54	....	....	....	....	....	....	....
41°	2.64	....	....	....	....	....	....	....
42°	2.74	....	....	....	....	....	....	....

*Column 2—Long Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Brea-Olinda, 14 to 30 degrees; Torrance and Inglewood, 14 to 28; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.
Column 3—Whittier and La Habra crudes, 14 to 22 degrees; Montebello, 14 to 30 degrees.
Column 4—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset and Elk Hills, 14 to 33 degrees; Lost Hills and Belridge, 14 to 34 degrees.
Column 6—Santa Fe Springs. Only Union Oil Co. posts below 24 degrees.
Column 9—Salt Lake, 14 to 19 degrees inclusive; Santa Maria, 14 to 30 degrees; Ventura, 14 to 35 degrees. Posted only by Union Oil Co.

TANKWAGON PRICE CHANGES

July 22—Standard Oil Co. of Kentucky reduced kerosene 1 cent at Clarksdale, Miss.

September 15—Magnolia Petroleum Co. advanced kerosene 1 cent in Texas.

September 20—Union Oil Co. reduced tankwagon and service station prices of gasoline 3 cents in the Los Angeles district.

CRUDE PRICE CHANGES

September 15—Kay County Gas Co. reduced Crane and Upton County, Texas, crude 40 cents. Buckeye Pipe Line Co. reduced the gathering charge on Corning crude 10 cents.

September 16—Standard Oil Co. of Louisiana reduced Bellevue crude 10 cents.

PENNSYLVANIA MARKET IN EXCELLENT SHAPE

OIL CITY, Pa., Sept. 18.—Considering the lateness of the season and the decline in the use of the automobile which naturally comes at this time of the year the Pennsylvania refined market seems to be in excellent shape. Gasoline is about the same. The demand is good but some refiners contend it is just a trifle softer.

It is believed here the peak of the kerosene season, both in point of demand and price, has been reached and the market is more liable to go down than up. The demand during the past week was not as great.

Fuel oil is stronger. The demand is better, the price firmer and the product very scarce in this district. Neutrals continue in good demand and are strong and scarce. Cylinder stocks are in the same slump that has prevailed for some time but there is still a tremendous demand for bright stocks which are strong and scarce.

Wax is not moving extra good and it is a little softer.

CROWN CENTRAL'S PURCHASE

SAN ANTONIO, Tex., Sept. 18.—Crown Central Oil Corp. has purchased the half interest of Rydal Oil in leases covering 1,003 acres in Webb County, on which are 11 producing wells. Consideration is said to be approximately $400,000, part cash and part oil. Much of the acreage is in the Bruni tract extension of the Mirando Field.

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ATLANTA DETROIT KANSAS CITY CHICAGO HOUSTON OMAHA

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JONES COUNTY WILDCAT AN UNUSUAL WELL

(Continued from Page 31)

Garza County and which has long since been plugged and abandoned. They also traded a spread of 320 acres to the Marland Oil Co. for a similar spread around the Marland's No. 1 Cox in the opposite corner of Jones County, and it is now up to the Marland to get a well there to make Phillips' trade a good one. The original block included about 3,800 acres, and since the well came in the Phillips lease buyers have acquired 3,000 acres more, making their holdings total approximately 6,000 acres.

Credit to Science

For a rank wildcat, this one was sought out and discovered in much more of a systematic and scientific manner than the majority. A Phillips Petroleum Co. geological party mapped the Merkel dolomite, one of the few "workable" beds in this part of the country, for 30 miles. W. B. Kramer mapped this structure, which is just a medium-sized nose pointing a little south of west, and it looked good enough to the company for them to pay $1 an acre and a well for the block of 3,800 acres. Counting the 3,000 acres purchased by Phillips after a good showing was obtained, their average price was about $45 an acre. The Gulf Production Co. is said to have average $90 for its holdings around the block, all of which was purchased last week. The Humble Oil & Refining Co. spent $40,000 for considerable acreage in the vicinity, but didn't buy very close in. Several tracts a mile and a half to 2 miles from the well brought $100 an acre, and one 80-acre piece located just three-quarters of a mile due south of the well brought $300 an acre Saturday from Landreth. Landreth also bought a tract in the northwest corner of Section 20, Block 19, just half a mile south of the well, which calls for a drilling contract.

Nolan County Gets Attention

While Jones County is getting an active play, Nolan County is not being overlooked. The Phillips Petroleum Co. has a block of 6,000 acres centered around a point 3 or 4 miles southeast of Sweetwater, for some time. There is no drilling obligation on it, however. It centers around a structure similar to the one in Jones County. Harry Zweifel has the northwest 13 sections of Block 1 on the Winters land in the west central part of Nolan County and is moving in timbers for a test which will be located near the corners of Sections 130, 131, 124 and 125. J. L. Hart and O. V. Rose of Colorado City also have a drilling contract on Section 36 and the east half of Section 35 and have 90 days from September 13 in which to start a well.

The Hucony Gas Co.'s (Ed S. Hughes and Johnson of Abilene's) No. 1 Arthur Sears, 1,320 feet from the west line and 1,980 feet from the south line of Section 291, H. T. Stockman Survey, in the northeastern part of Nolan County, is a test that will be watched with interest during the next few weeks. It was down about 1,750 feet Friday.

Log of Phillips Petroleum Co.'s No. 1 Winters, SW Cor. N Half Section 19, Block 19, T. & P. Survey, Jones County, Texas

Casing Record—	Depth (ft.)
20"	125
15½"	536
12⅛"	663
10"	1,033
8¼"	2,258
Formation—	**Depth (ft.)**
Cellar	7
Lime, white, hard	11
Red rock, soft	15
Red rock, soft	110
Hole full of water	112
Sand (water), gray, medium	115
Red rock, medium	350
Red rock and lime shells, medium	660
Red rock, soft	910
Lime shells, gray, hard	912
Gray shale, soft	930
Red rock, soft	966
Lime, gray, medium	968
Shale, gray, soft	980
Lime	985
Shale, gray, medium	1,020
Shale, gray, medium	1,070
Shale and shells, gray, medium	1,545
Lime, broken, gray	2,025
Hole full of water	2,030
Sand, gray, soft	2,190
Shale, blue, soft	2,192
Lime, gray, hard	2,228
Sand, white, soft (HFW)	2,244
Shale, blue, soft	2,258
Lime, white, hard	2,326
Lime, broken, medium	2,355
Shale, blue, soft	2,372
Lime, gray	2,410
Lime, broken	2,420
Red, soft	2,440
Shale, soft (bad cave)	2,450
Lime, white, hard	2,460
Shale, gray, medium	2,490
Lime, gray, medium	2,495
Lime, white, hard	2,505
Lime, white, soft (more oil)	2,508
Lime, white, hard (oil and gas)	2,510
Lime, gray, medium (lot of oil)	2,514

TEXAS PANHANDLE

(Continued from Page 39)

Block 3, good show of gas, shut down for orders at 2,995 feet.

Donley County

A. T. Drilling Co.'s No. 1 F. E. Harrington, Section 39, Block C-3, shut down at 180 feet.

Hall County

Midwest Drilling Co.'s No. 1 C. M. Bass, shut down 2,003 feet.

Hartley County

Deep Rock Oil Co.'s No. 1 Lyman & Balfour, Section 9, Block 2, drilling 1,575 feet. Dorning and others' No. 1 A. C. Ashby, NE cor. Section 1, Block 1, location. Eslick and others' No. 1 J. B. Irving, Section 13, Block 13, drilling 1,200 feet. W. W. Holmes' No. 1 G. B. Coots, Section 58, Block XR, spudding. Humble Oil & Refining Co.'s No. 1 J. M. Shelton, C NW SE, Section 63, Brovo Subdivision, shut down 1,052 feet. J. B. McKanna's No. 1 E. S. Collins, Section 3, Block LS, rigging up; No. 1 Francis Farwell, Section 10, Block 22, rigging up; No. 1 J. M. Shelton Estate, Section 29, League 202, Capital lands, shut down 650 feet. Kork Oil Co.'s No. 1 J. M. Shelton Estate, Section 1, Block B-8, spudded and shut down. Breck Walker's No. 1 Stone, Section 35, Block I. T. O., T. & N. O. Survey, location.

Hemphill County

Andrade and others' No. 1 Humbolt, Section 44, Block 1, location. Dorning and others' No. 1 Alexander, NE cor. J. Poitevent Survey, spudded and shut down. Hoover and others' No. 1 Schaller Estate, Section 4, spudded and shut down; No. 1 fee, Section 119, Block 41, H. & T. C. Survey, fishing at 510 feet. Mitchell and others' No. 1 J. E. George, Section 40, Block A-2, pulled rig in, total depth 900 feet. McCorkel and others' No. 1 Shaller Estate, J. Fanning Survey, building rig.

Hutchinson County

Lee Flowers and Marland Oil Co.'s No. 1 Carver in the William Heath Survey, fishing at 1,200 feet. Get Oil Co.'s No. 1 W. P. Allen, spudded and shut down. Gibson Oil Co.'s No. 1 McCormick Estate, Section 18, Block M-23, shut down for orders at 3,166 feet. Inspiration Oil Co.'s No. 1 Erle Thompson, Section 4, Block M-18, plugging to abandon at 3,250 feet. Panfield Oil Co.'s No. 1 Luginbyhl Brothers, drilling 400 feet. Western Development Co.'s No. 1 O. W. Jarvis, fishing for tools at 3,050 feet. Big Creek Oil Co.'s No. 1 Cal Merchant, Section 37, Block 47, running 6-inch to 2,585 feet. Roxana Petroleum Corp.'s No. 1 H. Jasper, Section 6, Block M-26, shot twice at total depth of 2,900 feet and made 1 bbl. daily afterward. Sinclair Oil & Gas Co.'s No. 1 Williams, Section 4, Block 47, drilling 2,330 feet. Sunrise Oil Co.'s No. 1 William Lyal, Section 33, Block Z, shut down at 2,660 feet to drill water well.

Lamb County

E. C. Marrs and others' No. 1 Yellowhouse, drilling at 1,700 feet.

Lipscomb County

Everett and others' No. 1 Mrs. H. D. May, rig on ground. McCorkle and others' No. 1 H. O. Peery, location abandoned. Snyder and others' No. 1 A. Barton, drilling 2,700 feet.

Moore County

Amarillo Oil Co.'s No. 1 Masterson-J, Section 59, Block O-18, drilling 1,365 feet; No. 2 Terry Thompson, Section 19, Block 44, shut down at 1,400 feet. Cadman and others' No. 1 J. T. Sneed, Jr., Section 68, Block 3, shut down for casing at 1,850 feet. Shamrock Petroleum Corp.'s No. 1 O. E. Gober, Section 16, Block M-21, drilling 410 feet. Douglas Oil Co.'s No. 1 H. W. Beauchamp, Section 112, Block 44, drilling 700 feet. Flowers and Marland Oil Co.'s No. 1 J. T. Sneed, Jr., Section 25, Block 1, drilling at 2,045 feet. Humble Oil & Refining Co.'s No. 1 Kilgore, Section 28, Block 44, shut down for casing at 270 feet. Phillips Petroleum Co.'s No. 1 Sneed, Napoleon Jones Survey, shut down at 3,095 feet. Masters Oil Co.'s No. 1 J. T. Sneed, Jr., Section 58, Block 6-T, drilling at 395 feet. Morton & Co.'s No. 1 Rubert, Section 191, Block 3-T, drilling at 450 feet. Prairie Oil & Gas Co.'s No. 2 Sneed, Section 26, Block 6-T, gas at 2,288 feet, increased to 200,000 feet at 2,360 feet, drilling ahead at 2,470 feet. Moore County Oil Co.'s No. 1 Sneed, Section 30, Block 6-T, fishing at 1,010 feet. Shadler Brothers' No. 1 John Lowery, Section 237, Block 44, rig.

Ochiltree County

W. G. Burton's No. 1 Stickler, Section 579, Block 43, shut down at 2,500 feet. Hamilton and others' No. 1 R. E. Wamble, Section 144, Block 44, shut down 250 feet. McCorkle Pipe Line Co.'s No. 1 R. H. Moore, Section 471, Block 43, drilling 1,570 feet. Standard Development Co.'s No. 1 Bowden, Section 923, Block 43, shut down at 900 feet.

Potter County

Amarillo Oil Co.'s No. 5 Lee Bivins-A, Section 25, Block O-18, drilling 1,745 feet; No. 1 Fuqua, Section 4, rigging up. The California Co.'s No. 1 G. A. Carey, C SW NW NE, Section 6, Block Z-6, John H. Gibson Survey, location. Farmers Oil & Gas Co.'s No. 1 J. A. Jones, rig. Kelley & Harris' No. 1 Bush, Section 161, Block 9, location.

Roberts County

Gibson Oil Corp.'s No. 1 T. S. Jones, Section 109, Block C, spudded. Charles Page and others' No. 1 Hamilton, Tract 2, Clay County School Land, cemented 12-inch 482 feet. Murphy and others' No. 1 A. W. Gill, spudded and shut down. Pan-State Oil Co.'s No. 1 A. H. Tandy, Section 179, Block 42, rig. Pettijohn and others' No. 1 J. A. Meade, Section 29, Block B-1, spudded and shut down for water. Trammel and others' No. 1 A. H. Tandy, in Clay County School Land, spudded and shut down for water.

Sherman County

Eclipse Drilling Co.'s No. 1 Lee Bivins, Section 35, Block 2, rigging up. Get Oil Co.'s No. 1 Bivins, Section 35, Block-B, shut down at 210 feet. Phillips Petroleum Co. and Savoy Oil Co.'s No. 1 Roach, Section 161, Block 10, drilling 1,060 feet.

Wheeler County

American Refining Co.'s No. 1 E. E. Carlton, center west half Section 29, Block 13, H. & G. N. Survey, location. Boyles & Johnson's No. 1 S. L. Lewis, Section 40, Block 24, rig. Gibson Oil Corp.'s No. 1 W. E. Bentley, Section 42, Block 24, had 9,000,000 feet of gas at 2,263 feet and was shut down for orders at 2,264 feet; No. 2 H. C. Phillips, Section 41, rig. Hill, Cook & Riley's No. 1 L. H. Webb, rig. Laycock and others' No. 1 fee, Section 10, Block 27, drilling 1,500 feet. Mid-Kansas Oil & Gas Co.'s No. 1 W. C. Company, Section 12, Block 27, flowing 50 bbls. daily at 2,195-2,275 feet. Murchison & Fain's No. 1 Binkley & Cain, Section 55, Block 24, coring at 2,163 feet; No. 1 Binkley & Cain-A, Section 37, Block 24, location. J. J. Rook Co.'s No. 1 T. C. Jones, Section 1, Block 24, drilling 1,300 feet. Scott, Allen & Bledsoe's No. 1 J. H. Jackson, rig. Smith and others' No. 1 W. J. Johnson, Section 88, Block A-5, rig. Smith, Brady and others' No. 1 P. J. Sorenson, Section 53, Block A-4, shut down at 312 feet. The Texas Company's No. 1 Smith (Lewis), Section 40, Block 24, spudding 180 feet. Upham Gas Co.'s No. 1 Cody, Section 88, Block 17, shut down 260 feet; No. 1 Martin, Section 89, same block, spudded and shut down; No. 1 Alexander, Section 92, Block 17, rigging up tools; No. 1 Griswald, Section 1, Block 24, rig; E. L. Woodley, Jr.'s No. 1 Woodley, Sr., Section 13, Block A-5, drilling at 1,460 feet. Vaughn and others' No. 1 Roger O'Gorman, Section 83, Block 17, drilling 500 feet. World Oil Co.'s' No. 1 Jackson, new location, building rig.

DAILY AVERAGE PRODUCTION OF AMARILLO DISTRICT
Week Ending September 18, 1926
Hutchinson County

Company—	Wells	Dly. Av.
Amerada Pet. Corp., J. A. Whittenberg	1	60
Amerada Pet. Corp., J. A. Whittenberg-B	4	555
Amerada Pet. Corp., G. A. Whitberg	2	115
American Refining Co.	2	110
Apex Oil Co.	2	270
Badger Oil Co.	2	75
R. C. Barnum	1	
Canadian River Oil Co.	4	490
Canyon Oil & Gas Co.	3	2,750
Center Dome Oil Co.	1	
Centerfield Oil Co.	1	
Coble-Whittenberg	3	750
Currie Bros. and Phillips	2	430
Cockrell-McIlroy	2	620
Delmar Oil Co.	1	45
Derby Oil Co.	4	1,050
Devonian Oil Co.	3	870
Dixon Creek Oil Co.	21	6,800
Double 5 Oil Co.	1	70
Douglas Oil Co. and Cline	1	20
Dunnigan and others	3	1,165
Echo Oil Co.	3	1,125
Empire Gas & Fuel Co.	4	580
Fly-Blackburn Oil Co.	2	250
Gates Oil Co.	4	385
Goldelline Oil Co.	2	290
Golding & Phillips	1	
Gulf Production Co., Panhandle & Cline	30	5,615
Gulf Production Co.	16	4,390
Heywood and others	2	25
J. K. Hughes Dev. Co.	11	1,845
Holmes, Currie & McKnight	2	420
W. H. Holmes	1	220
Hutchinson County Oil Co.	1	
Dan A. Japhet	1	525
J. H. Lennix	1	
Lennix & Patterson	1	270
Lucky 10 Oil Co.	3	1,000
Marland Oil Co.	26	16,150
Midwest Exploration Co.	5	340
Minnehoma Oil Co. and Kistler	1	50
McMan Oil & Gas Co.	12	7,085
McIlroy & Herring	4	600
S. D. & W. W. McIlroy	3	925
McIlroy Bros. et al	3	360
J. H. Middleton	3	90
Murchison & Fain	1	300
Newby Oil Co.	1	30
New Domain Oil Co.	3	150
Phillips & Heywood	2	1,900
J. R. Phillips	1	25
Phillips Petroleum Co.	58	22,430
Prairie Oil & Gas Co.	18	3,960
Relief Oil Co.	2	475
Riley & Holmes	1	300
Roxana Petroleum Corp.	8	2,020
Ryan Petroleum Corp.	3	500
Shamrock Petroleum Co. (now Prairie Oil & Gas Co.		
Skelly Oil Co.	12	7,620
Skiatex Oil Co.	4	1,200
J. L. Smith	2	190
Smith & Bynum	2	275
Spring Creek Oil Co.	3	750
Summit Oil Co.	2	350
Sunny Jim Oil Co.	5	675
Sunburst Oil Co.	2	1,600
Travelers Oil Co.	2	640
Triangle Oil Co.	2	2,700
J. D. Ward (Snell)	1	70
J. D. Ward and others	1	60
Westex Oil Co.	7	2,800
White Eagle Oil & Ref. Co.	12	2,305
J. O. Whittington	1	
Total Hutchinson County	362	112,110
Average per well		309

Carson County

Company—	Wells	Dly. Av.
Amarillo Oil Co.	1	
American Refining Co.	7	595
Gates Oil Corp.	1	10
Gulf Production Co.	13	230
Marland Oil Co.	12	2,600
Roxana Petroleum Corp.	1	140
W. W. Silk and others	2	75
Skelly Oil Co.	2	95
Sunny Jim Oil Co.	2	50
The Texas Company	11	250
Total Carson County	52	4,045
Average per well		78

Gray County

Empire Gas & Fuel Co.	1	10
Gulf Prod. Co.	1	60
Magnolia Petroleum Co.	1	35
Prairie Oil & Gas Co.	3	1,155
Wilcox-Pampa Oil Co.	5	2,950
The Texas Company	1	5
Total Gray County	12	4,215
Average per well		351

Potter County

Company—	Wells	Dly. Av.
Amarillo Oil Co.	1	30

Wheeler County

Company—	Wells	Dly. Av.
Gibson Oil Corp.	2	125
Continental Oil Co.	2	275
Midwest Exploration Co.	3	15
Total Wheeler County	7	415
Average per well		59
Grand Total Panhandle	434	120,815
Average per well		278
Average per well last week		284
Total Panhandle 4 weeks ago	333	105,820
Average per well 4 weeks ago		318

NORTH TEXAS FIELDS

(Continued from Page 40)

abandoned at 1,420 feet. Nelson's No. 1 Sneed had 250,000 feet at 400-15 feet and was straightreaming at 500 feet. Womac & Loofborrow's No. 1 Funderburk was dry and abandoned at 1,546 feet.

Callahan County

Adams and others' No. 1 Windham had a show of gas at 3,363 feet. Borealis Oil Co.'s No. 1 Finley was dry and aban-

doned at 2,750 feet. Prairie Oil & Gas Co.'s No. 2 Baum made 30 bbls. at 1,398-1,406 feet; No. 6 Bond made 20 bbls. at 1,387-1,402 feet.

Coleman County

Bradstreet and others' No. 1 Teagle topped sand at 1,220 feet with 2,000,000 feet of gas. Ross & Wright's No. 1 Morris was shot with 150 quarts at 2,740-2,800 feet after plugging back from 3,154 feet, but was abandoned as dry. Schermerhorn and others' No. 1 Gray had a sand at 1,935-78 feet with a show of oil and water and was drilling ahead at 2,015 feet.

Comanche County

Bundt and others abandoned the location for their No. 1 Perry. Carter and others' No. 1 Cogburn was dry and abandoned at 3,100 feet. Kirk and Brewer's No. 1 Mauncey was dry and abandoned at 3,165 feet.

Cooke County

Hooser Oil Co.'s No. 3 Dennis made 105 bbls. at 1,244-77 feet. C. C. Lanier's No. 2 Hyman pumped 55 bbls. from broken sand at 1,222-67 feet; No. 3 pumped 85 bbls. at 1,158-63 feet. C. C. Lanier and others' No. 6 Hyman swabbed 6 bbls. in 12 hours from broken sand and shale at 1,196-84 feet. Leonard & James' No. 1 Hamilton was temporarily abandoned at 1,925 feet. Roxana Petroleum Corp.'s No. 1 Hyman had sand at 1,162-79 feet, total depth 1,212 feet, and the swab was lost in the hole. It bails about 16 bbls. daily and may be drilled deeper. Sun Oil Co.'s No. 2 Hyman makes 12 bbls. from oil sand and shale at 1,165-74 feet, with shale from that depth to 1,192 feet and will be deepened.

Eastland County

Lewis & Moore's No. 1 Harbin was estimated good for 15 bbls. at 1,232 35 feet and was running 10-inch casing. Magnolia Petroleum Co.'s No. 12 Harris was dry and abandoned at 1,425 feet. Mook-Texas Oil Co.'s No. 2 Casey had 8,000,000 feet of gas at 3,012-33 feet. Parton & Myers' No. 1 Fox had a hole full of water at 1,522 feet and was shut down for orders. Texas Pacific Coal & Oil Co.'s No. 27 Butler was dry and abandoned at 3,494 feet.

Arnold and others' No. 1 Rose topped the Caddo at 3,030 feet and was drilling at 3,056 feet. Barkley & Crotty's No. 1 Hill had lime at 2,942-97 feet and was going to shoot it. Eastland Oil Co.'s No. 1 Proctor and others was dry and plugged at 3,045 feet. Murchison & Fain's No. 1 Nunnally was dry and abandoned also at 1,804 feet.

Jack County

Seaboard Oil Co.'s No. 2 Cullers, which swabbed 125 bbls. at 2,084-92 feet, pumped 110 bbls. initially. Security Drilling Co.'s No. 1 First State Bank of Bryson pumped 40 bbls. from 2,341-66 feet.

Montague County

Farland Oil Co.'s No. 3 Maddox pumped 68 bbls. at 880-97 feet. F. H. E. Oil Co.'s No. 4 Howard and others-A swabbed 96 bbls. at 1,335 55 feet; No. 3 Salmon and others was estimated at 15 bbls. at 930-56 feet. Humble Oil & Refining Co.'s No. 7 Maddox made 62 bbls. at 874-94 feet; No. 8 made 80 bbls. at 870-90 feet. Pure Oil Co.'s No. 3 Maddox-C swabbed 72 bbls. in eight hours at 885-910 feet and was being placed on the pump. The Texas Company's No 22 Gist-A made 15 bbls. at 930-35 feet; No. 18 Oldham made 118 bbls. from oil sand at 1,035-82 feet, with broken sand 1,082 1,120 feet; No. 19 Oldham made 100 bbls. at 1,064-1,127 feet; No. 20 made 70 bbls. at 1,059-1,114 feet; No. 23 made 90 bbls. at 974-76 feet; No. 1 Riddle made 210 bbls. from solid sand at 1,130-53 feet and broken sand at 1,153-60 feet. Texhoma Oil & Refining Co.'s No. 2 Maddox-A made 80 bbls. at 871-97 feet. Walker and others' No. 1 Howard and others produced 75 bbls. from sands at 1,120-23 and 1,157 62 feet with broken sand at 1,123-57 feet.

Palo Pinto County

Hart's No. 1 Cardwell was dry and baandoned at 2,050 feet. Hart Oil Corp.'s No. 1 Orme was also a duster at 2,060 feet and Moore & Snebold's No. 4 Stuart was likewise abandoned at 1,720 feet.

Shackelford County

Dingee and others' No. 1 Diller Brothers had a hole full of water at 1,325-30 feet, but was drilling ahead. Gibson & Johnson's No. 1 Newell was dry and abandoned at 1,830 feet. Gwinnup and others' No. 1 Chapman was also plugged at 1,590 feet. Haile & Knight's No. 1 Reynolds had a show of oil at 1,190 feet. Harrell and others' No. 1 Sidebottom was dry and abandoned at 735 feet. Harris' No. 1 Matthews had 300 feet of oil in the hole at 1,054-59 feet and was shut down for orders.

In the Cook Ranch Pool, Humble Oil & Refining Co.'s No. 12 Cook had a show of oil at 1,340-45 feet and was drilling at 1,390 feet. Roeser & Pendleton and Marland Oil Co.'s No. 26 Cook A 84 made 100 bbls. at 1,124-50 feet. Roeser & Pendleton's No. 10 Cook B-84 flowed 800 bbls. at 1,307-32 feet.

Vickers & Wortham's No. 1 Hill was a location abandoned.

Stephens County

Humble Oil & Refining Co.'s No. 1 Richardson was shut down at 3,847 feet spraying 10,000,000 feet of gas. Phillips Petroleum Co.'s No. 1 Moon had sand at 3,108 feet, 1,000,000 feet of gas at 3,912-20 feet. Prairie Oil & Gas Co.'s No. 5 Lydon had a show of oil in lime at 3,238-58 feet and was shut down for orders.

Meredith & Thomas' No. 1 Chesley was junked at 2,110 feet and the rig was skidded. Swensondale Oil Corp.'s No. 1 Taylor was plugged back to 3,400 feet from 3,460 feet and shot with 160 quarts at 3,350-3,400 feet. It pumped 5 bbls. afterward. Texas Fidelity Oil Corp.'s No. 1 Pratt was making 300 bbls. and 30,000,000 feet of gas at 1,906-90 feet; a rig was moving in for No. 2.

Throckmorton County

Red Bank Oil Co.'s No. 1 Elliott was drilling at 4,080 feet. It had a show of oil in lime at 3,954-55 feet and lime at 4,004-27 feet yielded 6 bbls. of oil and 4 bbls. of salt water; No. 3 was shut down at 2,319 feet with a hole full of water; No 2 Parrott was fishing at 2,660 feet; No. 3 Parrott was swaging 5-inch casing at 4,025 feet, having a show of oil in lime at 3,944-4,025 feet. Reiter-Foster Oil Corp.'s No. 2 Parrott was shut down, having drilled dry sand at 3,944-4,001 feet.

Wichita County

Bridwell & Heydrick's No. 7 Ward & Todd was swabbing and flowing 500 bbls. at 1,830-59 feet and lime at 1,877-79 feet. Clark and others' No. 8 Ward & Todd flowed 1,250 bbls. in 24 hours September 16 from sand at 1,846-53 feet. T. F. Hunter's No. 1 Hines was dry and abandoned at 1,920 feet. O'Donohoe & Gates' No. 1 Allen & Kemp C was dry and plugged at 1,851 feet. Texhoma Oil & Refining Co.'s No. 1 Burnett-O had sands at 1,556-58 feet and 1,569-80 feet which put 500 feet of oil in the hole per hour.

Wilbarger County

Empire Gas & Fuel Co.'s No. 49 Stephens made 20 bbls. at 1,314-24 feet. Humble Oil & Refining Co.'s No. 15 Waggoner-H swabbed 105 bbls. in 18 hours and pumped 121 bbls. in 24 hours at 2,389-94 feet; No. 2 Waggoner-P swabbed 124 bbls. in 18 hours at 2,366 89 feet, total depth 2,430 feet. Milham Corp.'s No. 6 Waggoner-H swabbed 10 bbls. at 2,532-40 feet, total depth 2,562 feet. Phillips Petroleum Co.'s No. 1 Waggoner-C swabbed 175 bbls. in 18 hours at 2,345-49 and 2,351-60 feet; No. 7 Waggoner-H swabbed 216 bbls. in 24 hours at 2,396 2,416 feet and will be deepened; No. 2 Waggoner-M was dry and abandoned at 2,522 feet; No. 2 Waggoner-R swabbed 80 bbls. from lime at 2,294-98 and oil sand at 2,329-41 feet. Waggoner Refining Co.'s No. 1 Waggoner-D swabbed 30 bbls. after a 10-quart shot at 1,940-56 feet. H. W. Weir's No. 1 Zipperle was dry and abandoned at 1,330 feet.

Young County

Atlantic Oil Producing Co.'s No. 9 Rachuig B swabbed 250 bbls and pumped 150 bbls. from sand at 1,148-58 feet. Barclay & Harris' No. 1 Johnson was dry and plugged at 700 feet. Barnes and others' No. 3 Brown made 15 bbls. at 547-62 feet. Casey and others' No. 1 Steen was temporarily abandoned at 550 feet. Madden & Hunt's No. 6 Benson made 30 bbls. at 872-94 feet. Murchison & Fain and Marland Oil Co.'s No. 4 Campbell-E was a duster at 988 feet. Ruff and others' No. 3 Stewart made 93 bbls. at 808-29 feet. Simms Oil Co.'s No. 2 Routon made 40 bbls. at 857-69 feet. Simms Oil Co., Cosden and Consolidated Oil Co.'s No. 3 Gregg was shot with 3 quarts at 595-605 feet and made 5 bbls. The Texas Company's No. 16 Beardon made 11 bbls. at 1,082 97 feet; No. 2 Stewart. made 7 bbls. at 774-92 feet Wichita Production Co.'s No. 8 Borem made 4 bbls. at 1,069-76 feet. Pitzer & West's No. 8 Keller-C made 50 bbls. at 1,895-1,947 feet.

WEST TEXAS WILDCATS

Andrews County

A. G. Carter & Zweifel's No. 1 Cowden, moving in material. H. Zweifel and others' No. 1 Means, location. Maer & Staniforth's No. 1 W. S. Taylor, location.

Brewster County

J. Rosenborough & Skinner's No. 1 Skinner, fishing casing at 1,055 feet.

Coke County

Lipan Oil Co.'s No. 1 E. G. Rawlings, drilling by tools 2,640 feet.

Concho County

The Exploration Co.'s No. 1 Hartgrove, shut down at 452 feet. Kemper Kimberlin and others' No. 1 Schultz, fishing tools 1,520 feet. Culbertson Brothers' No. 1 W. S. See, underreaming 8¼-inch casing at 800 feet. Gene Mays and others' No. 1 Hartgrove, shut down at 892 feet.

Crane County

Cranfill Brothers' No. 1 P. J. Lea, drilling at 3,200 feet. Duffy Brothers and others' No. 1 Cowden Brothers, rigging up; No. 1 Griffith, location. Gulf Production Co.'s Nos. 1, 2, 3 Crier-McIlroy, shut down for storage; No. 2 T. J. McIlroy, fishing two strings of tools at 2,165 feet; No. 3 T. J. McIlroy, shut down for storage; No. 1 State-Z. T. Lasseter, skidding rig 25 feet north to start new hole. Independent Oil & Gas Co.'s No. 1 E. S. Hughes, top salt 653 feet, drilling at 1,325 feet; No. 2 Taylor, location; No. 3 Taylor, rigged up and shut down; No. 5 Taylor set 10-inch at 413 feet; No. 7 Taylor, fishing for tools at 2,575 feet; No. 8 Taylor, drilling at 2,535 feet; No. 9 Taylor, rigging up; No. 10 Taylor, building rig. Magnolia Petroleum Co.'s No. 2 University, top lime at 2,937 feet, shut down at 2,970 feet; No. 2 O'Keefe, rigging up. Marland Oil Co.'s No. 1 Mary Dawson, building rig 330 feet from north and east line of lease in Section 84, Block X; No. 1 Gibbs, drilling at 1,899 feet; No. 1 Hughes-Gibbs, 2,308-45 feet, plugged back to 2,335 feet, swabbed 237 bbls. in 36 hours initially and 106 bbls. Monday; No. 2-C E. S. Hughes, drilling at 2,200 feet; No. 3-C E. S. Hughes, top salt at 640 feet, drilling at 675 feet; No. 1-D E. S. Hughes, set 6-inch at 2,255 feet. F. P. Zoch & Marland Oil Co.'s No. 2 Keith-Hughes made 160 bbls. Monday. Prairie Oil & Gas Co.'s No. 1 University, rig; No. 2, rig. The Texas Company's No. 1-F Union Land, pumps an average of 20 bbls. of oil and 45 bbls. of water at 3,014-16 feet, put on pump on September 9; No. 2 H. M. King, swabbing 125 bbls. after shot. The Texas Company's No. 5 H. M. King, location; No. 6 drilling at 2,170 feet; No. 7 top salt at 645 feet, drilling 1,550 feet. Texas Development Co.'s No. 1 Cowden, shut down at 3,820 feet. Tidal Oil Co.'s No. 1 University, completed for 60 bbls. at 3,017-50 feet. Zweifel and others' No. 1 Cowden, location.

Crockett County

Archer Oil Co.'s No. 1 Couch, location. Cranfill Brothers Oil Co.'s No. 1 Harris, location. Gulf Production Co.'s No. 1-D L. P. Powell, fishing for tools at 1,030 feet. Humble Oil & Refining Co.'s No. 1-B Powell, spudded 100 feet. J. K. Hughes' No. 2-A Powell, spudded 325 feet; No. 3-A drilling at 1,010 feet; No. 2-B underreaming 12-inch at 735 feet. Magnolia Petroleum Co.'s No. 2 Shannon, location. Marland Oil Co. and Wallace's No. 1 J. S. Pierce, location. Republic Production Co.'s No. 1 L. P. Powell, top salt at 1,125 feet, drilling at 1,400 feet. William Schaffer and others' No. 1 University, shut down at 2,191 feet. Ben Simon and others' No. 1 Shannon, running 5⅜-inch at 2,600 feet, hole full of sulphur water at 2,518 feet. J. D. Young and Cromwell's No. 1 R. Massie, show of oil at 2,100 feet, drilling at 2,165 feet; No. 1 Shannon, spudded at 50 feet; No. 2, location. H. F. Wilcox Oil & Gas Co.'s No. 1 University, drilling at 3,070 feet. F. P. Zoch and others' No. 1 University, shut down at 2,005 feet.

Culberson County

James H. Gardner and others' No. 1 Radford, material on ground. Plymouth Oil Co.'s (Big Lake) No. 1 C. L. Cass, spudded and shut down.

Ector County

J. S. Cosden and others' No. 1-A G. W. Connell, drilling anhydrite at 3,170 feet; No. 1-B shut down at 3,720 feet. The Exploration company's No. 1 Kloh & Ramsey, fishing for tools at 3,550 feet; No. 1 J. D. Slator, moving in material. Llano Oil Co.'s No. 1 E. P. Cowden, drilling in brown shale at 2,580 feet. Sid Richardson's (Leigh Taliaferro) No. 1 Henderson, underreaming 10-inch casing at 1,280 feet. Simms Oil Co.'s No. 1 W. P. Edwards, drilling at 2,772 feet. F. E. Skinner and Eastland's No. 1 J. W. Buchanan, shut down for orders at 3,525 feet. Henry Zweifel and others' No. 1 Johnson, shut down for plugging orders.

Fisher County

Ideal Oil Co.'s No. 1 W. F. Martin, fishing tools at 3,070 feet. E. W. Raney's No. 1 Maberry, underreaming 6⅝-inch at 1,350 feet.

Gaines County

Hucony Oil Co.'s No. 1 Lindsey, shut down at 3,255 feet, contract complete.

Garza County

Deep Rock Oil Co.'s No. 1 S. M. Swenson, drilling at 3,200 feet. Emerald Oil Co.'s No. 1-A J. M. Boren, plugged backed to 2,050 feet from 2,600 feet and shot with 180 quarts at 1,970-2,002 feet; swabs 10 bbls. of oil and much water.

Glasscock County

Mascho and Marland Oil Co.'s No. 1 Calder, running 8-inch at 2,075 feet. Plateau Oil Co.'s No. 1 L. S. Bell, drilling at 415 feet.

Howard County

Edgar Oil Co.'s No. 1 Chalk, dry and abandoned at 1,800 feet. Fogelson-Cary's No. 1 Roberts, cleaning out at 650 feet. Lockhart & Co.'s No. 1 Hyman (Scott), 2,000,000 feet of gas at 1,620 feet, showed salt water at 1,525-50 feet, oil and gas at 1,288-1,302 feet. Lockhart & Co.'s No. 1-A Otis Chalk, drilling at 840 feet. Magnolia Petroleum Co.'s No. 1 Mary Chalk, drilling at 620 feet; No. 2 Otis Chalk, swabs 74 bbls. after shot at 1,619 feet; No. 3 drilling at 260 feet. Marland Oil Co.'s No. 2 Otis Chalk, completed swabbing 95 bbls. after shot of 40 quarts at 1,597-1,637 feet, top of pay at 1,625 feet; No. 3 drilling at 950 feet; No. 4 rigging up, 330 feet from south line and 990 feet from east line of lease. Reeves, Apperman and others' No. 1 H. R. Clay, shut down at 800 feet. Herbert Oil Co.'s No. 1 T. M. Wingo, straightreaming 6-inch at 3,012 feet. Humble Oil & Refining Co.'s No. 1 W. W. McCutcheon, drilling at 2,960 feet. J. K. Hughes Development Co.'s No. 1 J. Z. Means, shut down at 330 feet; No. 2, location.

Kent County

The Texas Co.'s No. 1 Barron, running 5⅜-inch at 4,335 feet.

Kimble County

Dixie Oil Co.'s No. 1 Harrison, drilling at 400 feet.

Loving County

Lockhart & Co.'s No. 1 E. L. Allen, drilling at 2,806 feet.

Lynn County

The Hart Oil Corp.'s No. 1 C. O. Edwards, drilling at 1,020 feet.

Menard County

J. R. Lewis and others' No. 1 White, spudding at 100 feet.

Midland County

M. Agress and others' No. 1 Jones, shut down at 2,115 feet.

Mitchell County

Teas & Stivers' No. 1 Hardee, fishing

for casing at 485 feet. B. H. Cogdell's No. 1-C F. E. McKenzie, shut down at 125 feet. Owen & Sloan's No. 1 C. P. Conoway, drilling at 2,480 feet. Magnolia Petroleum Co.'s No. 2 Foster, cleaning out at 800 feet; No. 1 G. W. Womack, drilling at 2,953 feet. Mid-Kansas Oil & Gas Co.'s No. 2 Ellwood, shut down at 1,125 feet, casing parted. The California Co.'s No. 1 J. J. Handley, drilling at 2,785 feet. F. P. Zoch and others' No. 1 J. J. Ford, straightreaming at 940 feet.

Nolan County

Hucony Gas Co.'s No. 1 Arthur Sears, drilling at 1,700 feet.

Pecos County

Tom Adams Oil Co.'s No. 2 Gray, shut shut down at 115 feet. Benedum & Trees' No. 1 J. C. Trees, spudding at 190 feet. Buel and others' No. 1 Hagan (W. W. Batcheler), drilling at 480 feet. Dixie Oil Co.'s No. 1 Hershenson, drilling at 5,280 feet. Cromwell & Kimberlin's No. 1 Scharff Blackman, rigged up and shut down. Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co.'s No. 1 Yates, Section 60, Block 1, location. Transcontinental Oil Co.'s No. 1 Perry, drilling at 3,500 feet. Southedn Development Co.'s No. 1 R. G. Heiner, location. Quinby Oil Co.'s No. 1 Townsite, shut down at 3,280 feet, show gas at 3,260 feet. West Texas Exploration Co.'s No. 1 Macy, shut down at 1,160 feet.

Presidio County

Headock & Miller's No. 1 Tootle estate, drilling by casing at 2,200 feet.

Reagan County

H. D. Camp and others' No. 1 University, shut down at 2,986 feet. Cope, Hagan & Ench's No. 1 Moore (White), location. Marland Oil Co.'s No. 1 University, location. Marland Oil Co. and Texon Oil & Land Co.'s No. 1 Sawyer, fishing for tools at 2,335 feet. Moody Oil Corp.'s No. 1 Sawyer, moving in tools. Roxana Petroleum Corp.'s No. 1 Boyd, spudding at 300 feet. Ben Simon and others' No. 1 R. A. Walters, drilling at 2,575 feet.

Reeves County

Deep Rock Oil Co.'s No. 1 Caldwell, location. Schooler, Slack and others' No. 1 Abram, drilling at 2,475 feet. Grisham & Hunter's No. 1 State land, drilling at 825 feet. World Oil Co.'s No. 1 Biggs, location.

Runnels County

Red Bank Oil Co.'s No. 1 Fowler, spudding. F. P. Zoch and others' No. 1 Bruck, spudding.

Schleicher County

Beavers and Leath and others' No. 1 J. A. & W. T. Whitten, spudded and shut down. Cope & Dalton's No. 1 Sol Meyer, drilling at 1,525 feet. S. G. Magee's No. 1 Robinson, location.

Scurry County

Northwest Co.'s No. 1 T. C. Stinson, spudded 20 feet and shut down.

Sterling County

Co-Operative Lease & Development Co.'s No. 1-A E. W. Douthett, shut down for casing at 3,032 feet. Exploration Co.'s No. 1 C. A. Boone, drilling at 2,300 feet. H. D. Runnel's No. 2 L. T. Clark, shut down for orders at 1,175 feet.

Stonewall County

Arkansas Fuel Co.'s No. 1 Craft, drilling at 4,270 feet in black lime. Ward Syndicate's No. 1 J. Q. Ward, shut down at 3,828 feet.

Terrell County

Sun Oil Co.'s No. 1 Scott, drilling at 710 feet. E. T. Williams and others' No. 1 Robertson, fishing casing at 1,825 feet.

Terry County

Kingsland Oil & Potash Co.'s No. 1 Brownsfield, 980 feet from the south line and 200 feet from the west line Section 7, Block A-1, E. L. & R. R. Survey, building rig.

Tom Green County

M. D. Bryant and others' No. 1 Llano County school land, trying to run 6⅝-inch at 2,980 feet. Texon Oil & Land Co. and Marland Oil Co.'s No. 2 Sorrell, spudding. World Oil Co.'s No. 1 Pulliam, drilling at 3,263 feet.

Upton County

Amerada Oil Corp.'s No. 1 Ed S. Hughes, location. Atlantic Oil Producing Co. and others' No. 1 Baker, location. Dixie Oil Co.'s No. 7 Burleson, flowing 60 bbls. an hour at 2,315 feet; No. 8 drilling at 2,025 feet; No. 5 Hughes, top of salt at 515 feet, drilling at 1,420 feet; No. 6, top of salt at 500 feet, drilling at 1,160 feet; No. 7, top of salt at 480 feet. W. H. Dunning and others' No. 1 Crier-McIlroy, fishing bailer at 1,900 feet; No. 1 McElroy, location; No. 2, location. Gulf Production Co.'s No. 2 M. L. Baker, shot with 180 quarts at 2,165-2,239 feet, total depth 2,240 feet, filled up 12 feet, lowering 6-inch casing; No. 1 M. L. Baker-B, show of oil at 2,179-82 feet, tested 12 gallons of water in 4 hours; No. 1 J. H. Shirk-D, total depth 2,251 feet, 350 feet of oil in hole; No. 1 Sanger, total depth 3,275 feet, brown lime, lowered 6 inches to 3,240 feet. Hults and others' No. 1 Giddings, location. Humble Oil & Refining Co.'s No. 1 A. S. Burleson, completed for 115 bbls. at 2,155-90 feet; No. 2 drilling at 2,130 feet; No. 3 top of salt at 565 feet, drilling at 1,390 feet; No. 4 drilling at 630 feet; No. 1 Ricker-Dodson, pumping 165 bbls. at 2,058-2,182 feet; No. 1 J. T. McElroy, drilling at 2,850 feet. Independent Oil & Gas Co.'s No. 3 Emma Wooley, top of salt at 495 feet, drilling at 1,270 feet; No. 4 drilling at 1,815 feet; No. 5, rig; No. 3 Burleson, 2,200-15 feet, 300 feet of oil in hole, shut down for tankage. Johnson & McCamey's No. 1 Shirk, top of salt at 695 feet, drilling at 1,260 feet. Kirkwood and others' No. 1 Rankin, drilling in sandy lime at 3,915 feet, rainbow show at 3,820 feet. McMan Oil & Gas Co.'s No. 2 M. L. Baker, rig. Marland Oil Co.'s No. 1 Estep, building rig 810 feet from east line and 330 feet from south line; No. 2 building 132 feet from east line and 330 feet from south line; No. 3 digging cellar 1,830 feet from east line and 330 feet from south line; No. 4, location; No. 5, location. Marland Oil Co. and Texon Oil & Land Co.'s No. 1 Halff, drilling at 480 feet. Roxana Petroleum Corp.'s No. 3 Della Bowen, top of salt at 515 feet, drilling at 1,100 feet. Sartain & Davis' No. 1 Bull, top salt at 1,660 feet, shut down at 1,660 feet. Skelly Oil Co.'s No. 1 O. F. Jones, top of salt at 1,761 feet, shut down at 1,885 feet. Sun Oil Co.'s No. 4 Burleson, top of pay at 2,085 feet, drilling at 2,095 feet. 250 feet of oil in the hole; No. 5, 2,067 feet, drilling at 2,080 feet, 200 feet of oil in the hole. The Texas Company's No. 8 R. Ring, top of salt at 485 feet, drilling at 925 feet; No. 9, top of salt at 510 feet, drilling at 1,170 feet; No. 1 A. S. Burleson, drilling at 1,600 feet; No. 3 rigging up; No. 4 drilling at 425 feet. Texas Pacific Coal & Oil Co.'s No. 2 Shirk, drilling at 2,090 feet; No. 3, building rig; No. 4, building rig.

Val Verde County

A. Blume's No. 1 Moore estate, shut down at 2,410 feet. Curso Williams' No. 1 Holman, rig. Hiawatha Oil Co.'s No. 1 Sellers, location. Independent operators' No. 1 Whitehead, shut down at 3,340 feet. O. O. Owens' No. 1 Mills, location. Plateau Oil Co.'s No. 1 Harrison, drilling at 3,090 feet. Transcontinental Oil Co.'s No. 1 W. S. Stevenson, drilling at 530 feet.

Winkler County

McCullough Oil Co.'s No. 1 Tobe Morton, location. Independent Oil & Gas Co.'s No. 1 Hendricks, location. R. S. Matthews and others' No. 1 Cowden Cattle Co., shut down for 20-inch casing at 90 feet. F. P. Zoch and others' No. 1 John Sealy, spudding 130 feet. Llano Oil Co.'s No. 1 W. F. Scarborough, location. P. A. Westbrook and others' No. 1 T. G. Hendricks, pumps 10 bbls. at 2,529 feet. Leigh Talaferro's No. 1 Sealy, top salt at 1,035 feet, drilling at 1,950 feet. L. D. Ladd and others' No. 1 J. W. Armstrong, fishing for tools at 630 feet. Brandon & McCamey's No. 1 Kloh & Ramsey, shut down at 3,100 feet.

NORTH TEXAS

Production by Fields for Week Ending September 11, 1926

Electra

Atlantic Oil Producing Co.	46
Empire Gas & Fuel Co.	741
Gulf Production Co.	877
Humble Oil & Ref. Co.	120
Magnolia Petroleum Co.	3,444
Panhandle Refining Co.	40
Phillips Petroleum Co.	15
Prairie Oil & Gas Co.	100
Rio Bravo Oil Co.	525
The Texas Company	3,411
Texhoma Oil Refining Co.	1,203
Miscellaneous	6,150
Total	16,672

Burkburnett

Gulf Production Co.	448
Humble Oil & Ref. Co.	421
Magnolia Petroleum Co.	2,472
Panhandle Refining Co.	200
Simms Oil Co.	19
Sinclair Oil & Gas Co.	51
Skelly Oil Co.	155
The Sun Oil Co.	39
The Texas Company	362
Texhoma Oil & Ref. Co.	517
Miscellaneous	7,252
Total	11,936

Iowa Park

Atlantic Oil Producing Co.	56
Gulf Production Co.	110
Humble Oil & Ref. Co.	120
Magnolia Petroleum Co.	315
Panhandle Refining Co.	85
Roxana Petroleum Corp.	7
Simms Oil Co.	71
The Texas Company	189
Texhoma Oil & Ref. Co.	525
Miscellaneous	2,775
Total	4,253

Wilbarger

Atlantic Oil Producing Co.	54
Empire Gas & Fuel Co.	825
Gulf Production Co.	55
Humble Oil & Ref. Co.	3,122
Phillips Petroleum Co.	5,573
Prairie Oil & Gas Co.	100
Roxana Petroleum Corp.	400
The Texas Company	22
Texhoma Oil & Ref. Co.	77
Miscellaneous	4,200
Total	14,428

Archer

Atlantic Oil Producing Co.	228
Barnsdall Oil Co.	923
Cosden Co.	352
Empire Gas & Fuel Co.	623
Gulf Production Co.	2,165
Humble Oil & Ref. Co.	1,061
Independent Oil & Gas Co.	7
Magnolia Petroleum Co.	1,590
Marland Oil Co.	952
Panhandle Refining Co.	115
Phillips Petroleum Co.	569
Prairie Oil & Gas Co.	1,875
Roxana Petroleum Corp.	415
Simms Oil Co.	1,155
Sun Oil Co.	225
The Texas Company	4,214
Texhoma Oil & Ref. Co.	2,795
Tidal Oil Co.	40
Miscellaneous	12,000
Total	31,304

Young

Atlantic Oil Producing Co.	798
J. S. Cosden	220
Gulf Production Co.	183
Humble Oil & Ref. Co.	241
Magnolia Petroleum Co.	130
Marland Oil Co.	2
Mid-Kansas Oil & Gas Co.	10
Panhandle Refining Co.	120
Phillips Petroleum Co.	10
Prairie Oil & Gas Co.	10
Roxana Petroleum Corp.	125
Simms Oil Co.	650
Sinclair Oil & Gas Co.	344
Sun Oil Co.	245
The Texas Company	323
Texhoma Oil & Ref. Co.	348
Tidal Oil Co.	75
Miscellaneous	4,380
Total	8,214

Stephens

Arkansas Fuel Oil Co.	25
Empire Gas & Fuel Co.	25
Gulf Production Co.	1,095
Humble Oil & Ref. Co.	540
Magnolia Petroleum Co.	340
Mid-Kansas Oil & Gas Co.	1,320
Phillips Petroleum Co.	365
Prairie Oil & Gas Co.	740
Republic Production Co.	130
Roxana Petroleum Corp.	45
Simms Oil Co.	30
Sinclair Oil & Gas Co.	75
Sun Oil Co.	160
The Texas Company	925
Texas Pacific Coal & Oil Co.	1,195
Transcontinental Oil Co.	3
Miscellaneous	4,185
Total	11,108

Shackelford

Amerada Petroleum Corp.	4
Empire Gas & Fuel Co.	20
Humble Oil & Ref. Co.	1,320
Independent Oil & Gas Co.	4
Magnolia Petroleum Co.	55
Phillips Petroleum Co.	570
Prairie Oil & Gas Co.	12
The Texas Company	176
Texhoma Oil & Ref. Co.	70
Miscellaneous	8,430
Total	10,660

Ranger

Arkansas Fuel Oil Co.	5
Gulf Production Co.	524
Humble Oil & Ref. Co.	40
Magnolia Petroleum Co.	520
Mid-Kansas Oil & Gas Co.	110
Panhandle Refining Co.	120
Phillips Petroleum Co.	15
Prairie Oil & Gas Co.	545
Republic Production Co.	40
Simms Oil Co.	20
Sinclair Oil & Gas Co.	280
The Texas Company	155
Texas Pacific Coal & Oil Co.	790
Transcontinental Oil Co.	30
Miscellaneous	2,380
Total	5,584

Eastland-Comanche

Empire Gas & Fuel Co.	5
Humble Oil & Ref. Co.	90
Magnolia Petroleum Co.	555
Mid-Kansas Oil & Gas Co.	130
Phillips Petroleum Co.	35
Prairie Oil & Gas Co.	80
Sinclair Oil & Gas Co.	20
Skelly Oil Co.	130
The Texas Company	100
Transcontinental Oil Co.	20
Miscellaneous	645
Total	1,810

Brown

Cosden Co.	580
Humble Oil & Ref. Co.	4,218
Phillips Petroleum Co.	160
Prairie Oil & Gas Co.	600
Simms Oil Co.	20
The Texas Company	620
Witherspoon Oil Co.	20
Miscellaneous	5,873
Total	12,091

Callahan

Amerada Petroleum Co.	100
Humble Oil & Ref. Co.	3
Prairie Oil & Gas Co.	840
The Texas Company	100
Texas Pacific Coal & Oil Co.	20
Miscellaneous	3,511
Total	4,574

Miscellaneous Pools

Reagan County	28,912
Clay County	573
Montague County	7,348
Jack County	240
Throckmorton County	1,480
Baylor County	152
Palo Pinto County	437
Coleman County	1,737
Scurry County	37
Mitchell County	3,545
Crockett County	1,060
Upton County	7,281
Total	52,802

Panhandle

Carson County	3,572
Hutchinson County	109,339
Wheeler County	630
Gray County	3,760
Total	117,301
Grand total	302,737

NORTH CENTRAL TEXAS ESTIMATED PRODUCTION

Week Ending September 18, 1926

Ranger District—	This Wk	Last Wk
Brown County	11,586	12,091
Callahan County	4,503	4,574
Coleman County	1,785	1,737
Comanche County	1,615	1,810
Palo Pinto County	434	437
Ranger County	5,580	5,495
Shackelford County	10,931	10,660
Stephens County	11,395	11,092
Jones County	800	...
Total Ranger District	48,629	47,896
Wichita Falls District—		
Electra	16,828	16,694
Burkburnett	11,708	11,923
Iowa Park	4,219	4,273
Archer County	30,677	31,405
Clay County	598	581
Wilbarger County	14,195	14,429
Montague County	7,481	7,279
Young County	8,523	8,224
Jack County	230	240
Throckmorton County	1,455	1,480
Baylor County	130	152
Cooke County	375	270
Total Wichita Falls Dist.—	96,415	96,950
West Texas District—		
Big Lake Field	29,780	28,912
Crane County	427	435
Crockett County	1,055	1,366
Howard County	338	222
Mitchell County	3,577	3,545
Scurry County	39	37
Upton County	7,125	7,804
Total West Texas Dist.—	42,341	42,321
Grand Total	187,385	187,167
Increase	218	

The Ranger-Eastland district, including its adjoining counties, was largely responsible for the increase of 218 bbls. in north Texas estimated production this week. This district, with the addition of Jones County to the producing list, scored a gain of nearly 1,100 bbls. while west Texas was just holding its own and the Wichita Falls district was declining 535 bbls. The latter area will show a considerable gain next week, however, due to the completion late this week of a gusher well in the old Sunshine Hill Field of Wichita County.

Montague County continued its steady climb, gaining 202 bbls. this week and making another new high of 7,481 bbls. Cooke County also established a record for itself of 372 bbls., the C. C. Lanier lease on the Hyman farm having averaged 100 bbls. daily for the week. Young County was also up 300 bbls. to 8,522 bbls. daily and Stephens and Shackelford Counties production showed gains of 303 and 271 bbls., respectively. The latter was due to new completions in the Cook Ranch Pool and the placing of a number of wells on the pump.

Among the counties which failed to hold up to last week's figures were Archer with a decline of 728 bbls., Wilbarger, which was down 234 bbls., Wichita, which decreased 135 bbls., and Brown County, which was down 505 bbls. daily. In Archer County, The Texas Company's production increased 440 bbls. to a total of 4,654 bbls. daily, the company's Turberville-C well having made 1,611 bbls. The Simms Oil Co. lease in this pool also averaged 548 bbls. for the week.

In west Texas, the Reagan County Field increased 868 bbls., due to recent good completions on both the Big Lake and Texon properties, but Crockett County declined about 300 bbls. and Upton County also showed a decrease. Howard

County registered about a 50 per cent increase, having averaged 338 bbls. as compared with 222 bbls. the previous week.

Mrs. A. M. McQueen Dies in Peru, While On Visit to Daughter

CHATHAM, Ont., Sept. 16.—A cable from Negritos, Peru, to the family at Toronto on Saturday brought word of the sudden death there of Mrs. McQueen, wife of A. M. McQueen, vice president of Imperial Oil, Ltd., and the International Petroleum Co.

Mrs. McQueen left Toronto early in August to visit her daughter, Mrs. S. F. Heard, of Negritos, and had planned to return to Canada in November. A few days ago word was received that as a result of an infection of the blood she was a patient in the Imperial Hospital there. Although her illness was not thought dangerous, Mr. McQueen, who was in Edmonton attending a conference called by Premier Brownlee of Alberta, left at once for the East and arranged to sail from New York to Peru. He had barely left Edmonton when reports reaching Imperial headquarters from Negritos became more alarming. Although the medical services at Negritos are of the highest order, specialists from Panama were hurriedly summoned, and a diagnosis of Mrs. McQueen's case was cabled to Canada to obtain the advice of a Toronto specialist. All efforts were unavailing, and Mrs. McQueen's death occurred Saturday morning.

The funeral service was held at Negritos on Tuesday. Instructions were issued by the president of Imperial Oil, Ltd., that the steamer Ontariolite of the Imperial fleet should convey the remains from Talara to Canada. The Ontariolite is expected to reach Halifax about October 2.

In September, eight years ago, Mr. and Mrs. McQueen received in the staff house of the company at Negritos news that their son, Murray, had been killed in action in the second battle of Cambrai.

Mrs. McQueen, in company with her husband, had made a number of trips to Peru, where she was well known in social and administrative circles. A native of Petrolia, she was before her marriage Miss Sue Luckham, a daughter of Mr. and Mrs. William Luckham of Petrolia. She leaves her husband, two daughters, Mrs. Heard of Negritos and Miss Joan of Toronto, and a son, Neil McQueen, of Calgary. Two sisters and four brothers also survive.

BUCKEYE VETERANS MEET

FINDLAY, Ohio, Sept. 18.—Findlay, one of the Trenton Rock Fields best known cities, entertained the retired employes of the Buckeye Pipe Line Co. at the fourth annual reunion and banquet on Saturday, September 11, of the Buckeye Retired Employes' Association. Dinner was served in the spacious dining room at Elks Hall, where all partook of a splendid repast.

Letters and telegrams were read from D. S. Bushnell of New York and Martin Moran of Tulsa, Okla., expressing regret at being unable to meet their old friends on this occasion, adding that they expected to be on hand for the 1927 gathering.

A roll call brought forth response from 25 members of the association, others being unable to attend on account of sickness or long distances to travel. Five invited guests were present.

The fifth annual gathering will be at Findlay the second Saturday of September, 1927, when the members and guests are invited to bring their wives.

No changes were made in the officers or committees. The officers are O. S. June, president; S. M. Fletcher, vice president, and Tim McMahon, secretary-treasurer. Committee of arrangements comprise Barney T. Jacobs, Mike Enright and H. H. Fox.

NEW OIL QUESTIONS REQUIRE NEW RULING

An important act of the American Bar Association at its recent meeting in Denver was the organization of a new section to deal with mineral law, referring particularly to the petroleum industry. A Texas member who made the proposal said:

"New statutes are being passed to meet new conditions and new perplexing questions are being presented to the courts. New legal phases of the marketing problem are concurrently arising. New and special tax laws are to be construed—gross production tax, gasoline tax and newly enacted franchise tax. The status of royalty owners has new aspects. New conservation laws and the extension of the police power must be considered and construed.

"The various geophysical methods that have been developed in the last few years are still developing, having for their purpose the making of an examination of the subsurface of the land to detect the presence of supposed oil-bearing or oil indicating structures by means of scientific appliances located on the surface, are already giving rise to legal questions that have never before been presented to the profession and with regard to which there are no legal precedents.

"In addition to the fact that the oil industry presents more novel and unsettled law questions than any other industry in our country today, we have present a confusing situation due to the fact that on many vital questions the courts of different states have reached different and conflicting decisions, so that an oil lease provision is construed in one way in one jurisdiction and immediately across the state line in the next jurisdiction it is construed in a different way. These and many other questions are now engaging the attention of thousands of lawyers and the solution of these various problems affects not only the oil and gas companies and royalty owners, but the general public as well."

AMERADA SUBSIDIARY FOR VENEZUELA FIELDS

The Amerada Corp., control of which passed from British to American interests a short time ago, has entered the South American fields on an extensive scale. Announcement was made of the formation of the Esperanza Petroleum Corp. in Delaware, which will operate as a subsidiary of the Amerada Corp. in South America. The subsidiary will have a capital of $1,000,000, consisting of 100,000 shares of $10 par value.

The Esperanza Petroleum Corp. has acquired a leasehold covering 232,000 acres, in the district of Cajigal, State of Anzoatagui, eastern Venezuela, and about 60,000 acres around Lake Maracaibo, in the Republic of Venezuela. The new company has already established headquarters in Venezuela.

UNIVERSITY LEASES NOT TO BE DISTURBED

AUSTIN, Tex., Sept. 20.—Investigation into the gas and oil permits granted by the Land Commissioner on University of Texas lands in west Texas will not be made, Assistant Attorney General R. J. Randolph announced. He said that in 1925 the University of Texas Board of Regents accepted an opinion written by Charles L. Black of Austin upholding the validity of oil and gas leases on university lands and that recent opinions rendered by other attorneys not in the Attorney General's office, attacked the constitutionality of the oil and gas permit law, are not being regarded.

The opinion accepted by the Board of Regents held that the leases executed and delivered by the Commissioner of the General Land Office to the Texon Oil Co. and the Big Lake Oil Co. are valid.

RULE FOR REGISTERING OIL LANDS IN MEXICO

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal,

WASHINGTON, Sept. 20.—The manner in which registration of alien-owned land in Mexico should be complied with to avoid retroactive and confiscatory effects has been announced by the Department of Commerce. Walter E. Aylor of the Division of Commercial Law has prepared a summary of these requirements, which follows:

To avoid retroactive or confiscatory effects in respect to property rights of foreigners acquired or vested prior to the promulgation of the so-called "organic law of Section 1 of Article 27 of the general Constitution of Mexico," provision has been made that foreigners holding any right of the kind which is the subject of this law, and which was acquired before its enactment, are permitted to make a manifest of their property before the Secretariat of Foreign Relations within one year of the date of its promulgation and thus assure themselves of their rights. If a foreigner, however, fails to make such manifest, his acquisition shall be deemed to have occurred subsequently to the promulgation of this law.

The manifest contains: (1) The name and surname, or firm name, and domicile of the owner; (2) the nature and description of the property or rights manifested, and (3) the description of the title of acquisition necessary for its identification, including the date thereof. Blank forms for the manifest are transmitted to all municipal presidents of the Republic, so that foreigners residing in the district may be able to file their manifests opportunely. These manifests are filed in duplicate with the Secretariat of Foreign Relations, one original being returned to the manifestant, with indication thereon of the authenticated date of its presentation, for his protection.

There appears to have been some misunderstanding among some of the local governing bodies as to the interpretation and application of the law relative to the filing of the manifest. The Mexican Department of Foreign Relations, accordingly, has given to the press statements regarding the law regulating Section 1 of Article 27 of the Constitution, writes Acting Commercial Attache George Wythe, Mexico City. A translation follows:

"It has come to the knowledge of the Secretary of Foreign Relations that various municipal governments, pretending to comply with the organic law of Section 1 of Article 27 of the general Constitution, in respect of property of foreigners acquired before said law went into effect, are requiring that said foreigners declare their property before the proper municipal governments.

"This action is the result of an error of interpretation, since Article 15 of the law expresses clearly that manifests of property must be made before the Secretary of Foreign Relations. The forms have been sent to the president of the municipal councils only for the purpose of making clear to foreigners the intent of the law.

"The manifests conforming with Article 7 of the organic law of Section 1 of Article 27 of the Constitution, cited, which must be made before the Secretary of Foreign Relations, refer only to the following: (1) Prior acquisition of lands and waters in prohibited zones; (2) shares or interests in a Mexican company which may have lands, waters or their accession for the exploitation of mines, waters or combustible minerals in any part of the Republic; and (3) shares or interests in a Mexican company which may hold landed estates for agricultural purposes, if 50 per cent or more of the share capital belongs to foreigners."

WENTZ'S STUDENT FOUNDATION

Lew Wentz, largest individual oil producer in Oklahoma, whose home is in Ponca City, has established two $50,000 funds, one to be called the Lew Wentz Foundation of Oklahoma University and the other the Lew Wentz Foundation of Oklahoma A. and M. College, and has selected trustees to administer the two funds. The purpose of the double gift is to assist worthy students in the last three years of their college work in one or the other of the institutions named, by loans at a low rate of interest, up to 75 per cent of the amount needed to complete a year's work.

The foundation is drawn so that gifts may be added to it at any time.

The Exchange National Bank of Tulsa will hold the fund in trust for A. and M. College and the American National Bank of Oklahoma City will be the custodian of the Oklahoma University fund.

CIVIL WAR IN CHINA MAY HURT OIL TRADE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal,

WASHINGTON, Sept. 20.—The recent victory of the Cantonese forces at Hankow, China, is regarded as a very threatening gesture toward the oil industry. The fact that there is a strong feeling that these forces will hold the territory they have taken causes an apprehension that the same attitude will be assumed at Hankow.

The kerosene oil trade of China provides the greatest outlet for that commodity open to the American oil industry. At Canton, when these same forces obtained control, a tax was placed on gasoline of $2 (Mexican) per 10-gallon case. This was a part of the restriction that followed the Government monopoly at Canton, and was in the nature of a compromise effected after the Government monopoly had been declared.

Not only did the $2 (Mexican) per case tax fall upon the oil companies at Canton, but also the expense of collecting that tax was placed upon the companies.

Hankow is 600 miles up the Yangtse River, and for four months in the year is accessible to ocean-going tankers. The dense population of China, of which Hankow is the commercial center, provides an enormous market for kerosene. The biggest organization of the Standard Oil Co. in China is in the vicinity of Hankow.

The problem of excessive and illegal taxation in the increasing area of China subject to military control is giving evidence of the strangling of legitimate trade, and may soon cause sharp cuts in the exportation of kerosene to China, our largest market for this product.

DOHENY ASKS FOR REVERSAL

WASHINGTON, D. C., Sept. 16.—Edward L. Doheny through counsel asked reversal of the decision of the district and circuit courts of the District of Columbia in an appeal submitted to the United States Supreme Court.

Counsel for Doheny state that the only questions at issue between the Government and Pan American Petroleum Transport Co. are: (1) Was the Secretary of the Navy clothed with legal authority to make the contracts and leases now in suit? and (2) Did he make them? These questions counsel answers with the assertion that the Act of June 4, 1920, unquestionably conferred such authority on the Secretary of the Navy, while the record in the lower courts affords indisputable evidence that both contracts and leases were made by the Secretary of the Navy, Edwin Denby.

CALIFORNIA PRODUCTION

LOS ANGELES, Calif., Sept. 20.—California produced 18,765,080 bbls. of crude oil in August, according to the figures of the American Petroleum Institute. This is a daily average of 605,323 bbls. The daily average in July was 604,619 bbls.

The total fluid stocks at the close of August were 146,255,084 bbls., as compared with 148,001,772 bbls. at the close of July.

CRUDE OIL PRICES

(Continued from Page 135)

ROCKY MOUNTAIN STATES

Ohio Oil Co.—Midwest Refining Co.
(Effective May 17)

Rock Creek (Wyo.)	$2.25
Salt Creek—	
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° and above	2.37
Big Muddy	2.25
Mule Creek	1.75
Grass Creek, light	2.40
Grass Creek, heavy	.90
Elk Basin	2.40
Lance Creek	2.40
Rex Lake	1.45
Osage	2.40
Lost Soldier (Contract)	1.35
Greybull-Torchlight	2.15
Hamilton Dome	1.35
Cat Creek (Mont.)	2.40
Sunburst, (Mont.) (Sept. 14)	1.25
Florence (Colo.)	1.60
Artesia	1.95
Hogback (N. Mex.)	2.45

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective March 8)

Penna Grade Oil in New York Transit Lines (New York)	$3.40
Bradford District Oil in National Transit Lines (Pennsylvania)	3.40
Penna Grade Oil in National Transit Lines (Pa.)	3.30
Penna Grade Oil in Southwest Pa. Lines (West Virginia)	3.30
Penna Grade Oil in Eureka Pipe Line Lines (Pa.)	3.25
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.05
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 17)	2.40
Corning Grade Oil in Buckeye Pipe Line Lines (Ohio) (May 22)	2.55
Somerset Medium Oil in Cumberland Pipe Line Lines (Kentucky) (May 17)	2.50
Somerset Light Oil in Cumberland Pipe Lines (Kentucky) (May 17)	2.65
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (May 19)	1.25
Gaines (Pennsylvania) (Apr. 27)	2.85
Keister (Pennsylvania) (Feb. 15)	2.30

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective May 17)

Lima	$2.48
Wooster	2.55
Illinois	2.37
Indiana	2.25
Princeton	2.37
Plymouth	1.90
Waterloo	1.35
*Western Kentucky (Sept. 8)	2.10
†Cumberland, Barren and Monroe Counties, Ky., (May 17)	2.65
**Oil in lines of Stoll Oil Refg. Co. in Oil City, Ky.	2.65
**Oil in lines of Stoll Refg. Co. in Tinsley Bottom, Tenn.	2.46
§Oil Springs (Canada) (May 18)	2.95
§Petrolia (Canada) (May 18)	2.88

**Posted by Stoll Oil Refg. Co.
*Posted by Indian Refining Co.
†Posted by Paragon Development Co.
§Posted by Imperial Oil Co., Ltd.

MEXICO
(Effective May 13)

*Tuxpam light (f.o.b. Mex. ports)	$1.35
§Panuco heavy (f.o.b. Mex. ports)	1.15
Tuxpam (New York)	2.15
Panuco (New York)	1.80

*Plus 32.328c tax. §17.631c tax.

OKLAHOMA REFINED OIL PRICES DECLINE

(Continued from Page 28)

oline markets the next few weeks, the need for jobbers to buy or the ability of buyers to hold off orders. If consumption of motor fuel is fairly great, jobbers may be forced to buy despite the present uncertain conditions and thus strengthen the market, but on the other hand if requirements are not large jobbers may be able to withhold buying and cause further reductions in refined prices.

Except for the fact that gasoline prices were a little steadier than they have been in several weeks and there was some additional spot buying, there was little Monday and Tuesday to indicate a trend either way. For several days the market has just been described as "unchanged."

Although fuel oils are easier with prices off, market students on the whole are slow to make an predictions as to what these products will do. The consensus seems to be that much of the weakening of fuels at this time is due to the warmer weather throughout the country, which naturally would cut down the consumption. A check revealed very few inquiries for any grade of fuel oil being received Monday and Tuesday.

Gasoline and Naphtha

As previously mentioned, there was a slightly improved demand for motor fuels Monday and Tuesday, with more or less steadier tone, but actual moving prices of all grades of material were from an eighth to a quarter cent under markets of a week ago. The 58-60 437 (U. S. Motor) gasoline was free from some sources as low as 10½ cents, and one quotation of 10⅝ cents was reported. Refiners, however, said they had not found it necessary to accept under 10¾ cents from the trade, and some quotations were higher than that figure.

Higher gravity gasolines also weakened, with the 60-62 400 grade being available at 11 cents, and the 64-66 375 gasoline at 11½ cents. There seemed to be little activity in these grade, with only scattered orders being placed.

Naphthas were down, although there was little material offered. Prevailing quotations were at 10½ cents.

Natural Gasolines

The weak refinery gasoline markets had a bearish influence on natural gasolines, which were considerably s'ower the past week. Concessions were being sought by buyers Tuesday, and on the whole the price structure was easier, with the A grades not being bought over 10¼ cents, the B grades at 10 cents and Grade C from 9¾ to 9⅞ cents. Reports were out Tuesday of purchases of Grade A at 10 cents and B below 10 cents, but these deals were not general.

Kerosene and Distillates

Open offers Tuesday of kerosene in any quantity from a few large Texas refiners cast an extreme weakening cloud over the kerosene market. Good 41-43 water white material already was easy at 8¾ cents, and, with these generous offers market "dope" was to the effect that requirements could be filled at prices much below the 8¾ cents. There was very little call for kerosene at any price.

Distillates, as mentioned, made up the one real strong point in the picture. These products continued scare, and quotations were higher in line with a new demand for low cold test products. On material meeting these specifications quotations ranged from 5¾ to 6 cents, although other distillates could be bought slightly under this price.

Fuel Oil and Gas Oil

All grades of fuel oil were from 2½ to 5 cents a barrel off from what they were a week ago, and demand was light even at the lower quotations. This, as explained, was due to some extent to the warm weather. The lighter fuels, which have been able to hold up because of a heavy demand for cracking stock, also weakened, and 28-30 fuel was bought Monday for as low as 1.57½ cents. The 26-30 fuel was offered at $1.50. The 24-26 grade was available from $1.40 to $1.42½ cents, and lower grades from $1.30 to $1.35.

Gas oil also had a softer tone, but actual prices were not materially less than a week ago. Straight reduced material was being bought from 4¼ to 4½ cents, with other gas oil from 4⅛ to 4¼ cents.

MEXICAN FIELDS

(Continued from Page 40)

Northern fields, 30,350 bbls.; south fields, 30,800 bbls., a total of 61,350 bbls.

Going North

Indications point now toward a movement to the north, or in other words, to that part of Mexico that is adjacent to the Rio Grande. It has been remarked in this correspondence the interest that has developed in the Canton of Altamira, which is in the State of Tamaulipas, bordering on the Rio Tamesi, or, in other words, just north of Tampico. This is true, but, apart from this, some of the major companies of this district have considerable acreage blocked out in north Tamaulipas (just south of the Rio Grande) and it is possible that the coming of another year will find these properties being subjected to the drill in search of the ever elusive pay.

There is now in order a wildcat in the State of Coahuila, which will be drilled with standard tools, the James F. Martin Co., a contracting agency, under the management of Homer Craig, well known as for many years field superintendent of the Mexican Eagle Oil Co., having taken the contract. There has just been ordered from Tampico, C. V. Reynolds, a veteran standard driller, who is well known in the United States, and who had many years' experience in Burmah, and who is taking with him Frank McAulley, to this location, which will be known as No. 1 San Juan, in the state above named. Supplies, etc., will be gathered from the states for this outfit, as will be, no doubt, everything that goes for subsequent camps in juxtaposition to the Rio Grande. In sum, the Altamira district, just north of Tampico, is due for considerable attention from now on; but the northern part of Tamaulipas, or, in other words, that section of the state just south of the Rio Grande, and say, from Laredo east toward Brownsville, is going to receive its interest say from the commencement of the year to come.

Field operations in the Tampico district, including the southern fields, are devoid of other than routine interest, with intermittent rains making transportation a problem and slowing work generally.

Thomas H. Wheeler, Former Standard Oil Official, Dies at 82

ALEXANDRIA BAY, N. Y., Sept. 17. Thomas H. Wheeler, New York business man and former purchasing agent of the Standard Oil Co., died early today at his summer island home, Wau Wi Net, on the St. Lawrence, near here. Dr. Grant M. Madill, Ogdensburg specialist, was called in consultation by Dr. L. L. Sampson of Alexandria Bay, after Mr. Wheeler failed to improve from a severe heart attack suffered during August.

E. B. Wheeler of New York, his son, was with him when he died, although he was delayed at Cortland by an automobile accident in which he received two broken ribs and severe lacerations to his head.

The body was conveyed to Clayton Thursday morning on the Wheeler yacht, The Empress, and from there was taken to New York on a special New York Central train.

Mr. Wheeler was born in Phelps, Ontario County, New York, 82 years ago. He served throughout the Civil War and then went to Pithole, Pa., the center of the great oil boom of the 60's, and in that field sold lumber that provided homes for 15,000 families. It was at this time he met John D. Rockefeller. In 1873 he started his long service with the Standard Oil Co. as head of the cooperage department at Cleveland, Ohio. Later he was transferred to New York where he became purchasing agent for the Standard with offices at 26 Broadway. He retired in 1913 in his 69th year.

Mr. Wheeler quit school at the age of 10 years and made his own living ever after that time.

He was for many years Commodore of the Columbia Yacht Club. He was a member of the executive board of the Thousand Island Yacht Club and a member of the New York Yacht and Union League Clubs. He served several terms as president of the Twenty-third Regiment Association of New York Volunteers. His home in New York City was at 927 Fifth Avenue.

Mr. Wheeler was married on May 21, 1872, to Miss Celia Roberts at Leslie, Mich. She survives; also his son, Emmett B. Wheeler, and three daughters, Mrs. William T. Dewart, Mrs. Roy N. Bishop and Mrs. Henry G. Pearce.

Tributes From Associates

NEW YORK, Sept. 17.—George H. Jones, chairman of the Standard Oil Co. of New Jersey, said:

"I had always a very real and warm affection for Mr. Wheeler. He was remarkable in many ways. In his early life he earned his living by the strength of a good right arm. Some years after he had made his fortune, which was after his retirement from the oil business, he was motoring through upper New York when he passed a blacksmith shop in which he was once employed. The Commodore laid aside his hat, gloves and fine coat, put on an apron and proceeded to make by hand some perfectly beautiful old-time horseshoe nails."

President W. C. Teagle of the Standard Oil Co. of New Jersey said last night:

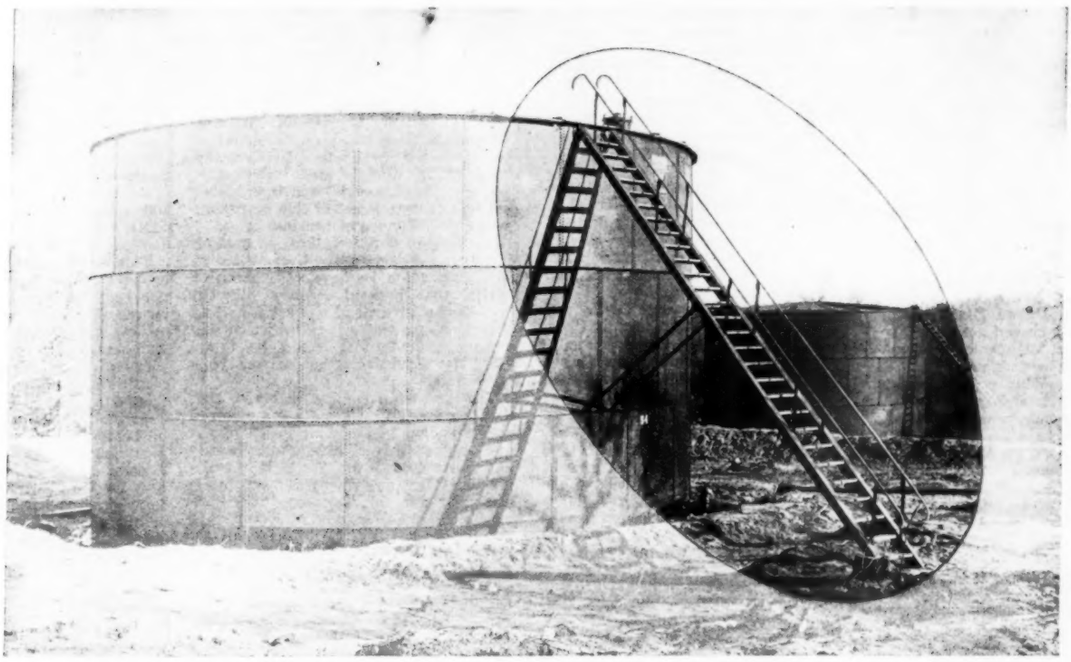
"The late T. H. Wheeler's life was an excellent illustration of the rewards of industry. Starting without any special advantages of birth or education, and making his living for many years with his hands, he achieved eventually a very responsible position with the Standard Oil Co. As a result of an excellent record he had made in business for himself, he was engaged to operate a cooperage plant for the company, and from time to time was given additional responsibility. He became general manager of all the company's cooperage works and purchasing agent. He fulfilled the duties of this difficult position most acceptably and was a real factor in building up the Standard Oil organization."

Funeral services were held in All Angels Church, West End Avenue and Eighty-first Street, at half past two o'clock this afternoon.

Charles R. Huntley, Financier and Former Oil Man, Passes On

Charles R. Huntley, president of the Buffalo General Electric Co., and one of the most prominent men in Buffalo's power, banking and manufacturing circles, died at his home in Lancaster, N. Y., a suburb of Buffalo, on September 18 at the age of 73 years. When the electric light and power industry was in its infancy, Mr. Huntley was made manager of the Brush Electric Light Co. of Buffalo, by the late Daniel O'Day, of pipeline fame, who was at the head of the company. Mr. Huntley had come from Bradford, Pa., where he had for several years in partnership with the late E. P. Whitcomb, represented the Standard Oil Co. interests on the floor of the Bradford Oil Exchange. Mr. Huntley had entered the employ of the Bostwick Purchasing Agency, the forerunner of the Seep Purchasing Agency, in 1877 as a minor bookkeeper. He rose to be the oil buyer for the Standard and at times bought as high as 100,000 bbls. of credit balance oil in a day. Then he became a broker on the floor of the Oil Exchange, and in the declining days of credit balance trading, Mr. O'Day induced him to go to Buffalo.

Charles R. Huntley became one of the best-known men in the electric light and power world. While he never was connected with oil after leaving Bradford he remained in touch with it and kept up his acquaintanceship with many of the men high in the oil world with whom he had been associated in his younger days. His brokerage partner, Eugene P. Whitcomb, in after years, rose to be president of the Union Natural Gas Corp., Pittsburgh, Pa. Mr. Whitcomb died about two years ago.



Columbian Welded Steel Stairways

The introduction by Columbian of 5000 and 10000-barrel Bolted Steel Tanks accentuated the need in the oil fields for safe, portable and easy-to-mount stairways for tanks. So Columbian pioneered the first and only welded steel stairway. And while about it Columbian engineers designed a stairway adaptable to all sizes of oil field tanks as well as tank farm, pipe line and refinery tanks.

For Any Size Tank

There is the ten-foot length for the one ring tank and the twenty-foot length for the two-ring tank. For the three-ring or higher tank, a ten and a twenty or a twenty and twenty-foot length are bolted together at destination. All stairways over 20 feet in length must be shipped in two sections.

Easy to Erect—Portable

A couple of wrenches are the only erecting tools needed. Bolts are furnished for attaching the hand rail, which has welded-on supports, and for splicing lengths over 20 feet. There are only 24 bolts on a 30-foot stairway. Two men can set up and attach to a tank in an hour. It is just as easily taken down and re-erected.

Safe—Convenient

Each 10 or 20-foot unit of the Columbian Stairway is welded into one integral network of steel. Steps are welded to the inside of the box-channel side members with the weld on the bottom side of the step. Steps have a pressed steel tread, giving maximum foot traction. Steps have a 10½-inch rise. Close enough to let the tired fellow mount the tank like walking and the peppy one will go up three at a time like a sailor or fireman. And the Columbian Stairway will support all the men you can crowd on it.

Sold by Columbian Dealers

In or near every oil field there is a Columbian Bolted Steel Tank Dealer maintaining adequate stocks and trained erecting crews. Let them fit your field tanks, farm tanks, pipe line tanks or refinery tanks with Columbian Welded Steel Stairways.

COLUMBIAN STEEL TANK COMPANY

EST'D 1894

TANKS FOR THE WORLD

1405-1625 WEST 12TH STREET KANSAS CITY, MISSOURI

TURNING TO SOUTH AMERICAN CRUDE; COMPETITIVE FACTORS CONSIDERED

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York City

NEW YORK, Sept. 20. — Without anticipating a serious shortage of American oil, leading petroleum companies of the United States are spending millions of dollars in the development of the oil resources of some of the South American oil-producing countries.

This expenditure of money has gone forward only after years of serious study of the economic and financial features of South American oil development. The proposition which they have had is merely a question of where crude oil could be produced most economically with reference to world's markets.

The American refiner looks for crude which, given equal quality, can be delivered at his plant at the lowest price or cost to him. He prefers to obtain his crude from the United States, but must go elsewhere if he can get as good crude more cheaply. He calculates it on the basis that if he does not do this, the other fellow—probably a foreign interest—will do it. A striking example of the way this economic principle works is that of the purchase of millions of barrels of California oil by Atlantic Seaboard refiners. Although brought three times the distance which Mid Continent crude would have to travel, the California oil was bought instead because it could be delivered "f.a.s." New York for less than the Mid-Continent.

For the very same reason, it is pointed out by oil refiners, South American oil will be bought instead of American oil by Atlantic, Gulf or Pacific Coast refiners in the United States, when the American oil became relatively more expensive to deliver to the refinery.

At present three South American oil producing countries are in actual competition with the United States in providing crude for American refineries. These are Peru, Colombia and Venezuela. Although this competition is not considered serious, the three countries are together exporting to the United States more oil than is Mexico.

Effect on Our Market

That supply and demand in the petroleum industry are always very delicately balanced, and subject to rather violent and unexpected swings, is generally realized. For this reason, the question is asked whether the expenditure of millions in South American development which has been progressing for several years will result in destructive competition with American oil, on the one hand; or, on the other, whether this development has not gone forward in contemplation of a shortage of domestic crude, with consequent high prices therefor, and therefore in anticipation of a real need for additional crude.

There are several factors bearing on these two questions which will be discussed with a view to clarifying the real meaning of this South American development.

Cost of Drilling

The average cost of drilling an oil well in the United States is said to be increasing gradually from year to year, as a result of the necessity of going to lower sands in known fields, and also due to the need for opening up new fields, most of which have been deep drilling propositions, such as the Texas Panhandle.

In the known South American fields, the average depths are much less than in the new fields being opened up in the United States; most of these fields are virgin, and the first sands are reached at from 500 to 2,000 feet, whereas in the United States drilling from 3,000 to 4,000 feet is the rule rather than the exception, in new developments.

Another factor not directly connected with drilling, but having to do with field development, is that of the necessity of competitive drilling. In the United States leaseholds are small and checkerboarded, as a rule, resulting in the need of drilling more wells to drain a given pool than would be the case in most South American fields, where holdings range from 10,000 to 1,000,000 acres in single blocks, in most instances. An example is a Colombian concession on which approximately 50 wells have been drilled with a potential output of 100,000 bbls. daily. Drilling has stopped, as enough production has been obtained. There is no need for competitive drilling, and so no more wells will be drilled until a larger potential or actual output is wanted. Under competitive conditions, it would be necessary to keep on drilling until this pool were actually drained, and the oil either stored above ground or carried away to markets. The effect of this is a much lower development cost per barrel of oil obtained.

These two factors of well depths and largely noncompetitive drilling, in themselves, are important factors in determining competitive relations between United States and South American crudes; of course in the final analysis they might be offset by other factors.

Transportation

In the matter of transportation of oil to markets and of equipment to the fields, the fields of the United States have had the advantage, and still have, but they are losing it. New development in the United States tends to move away from the coast line. The distance from the Panhandle Field to the Gulf Coast is greater than from the principal fields of Peru, Colombia and Venezuela to their seaboards. After the oil reaches seaboard, Colombia and Venezuela, especially, have an equal chance with the Gulf Coast, being about the same distance by water from the principal Atlantic Coast refineries.

With regard to equipment, the American fields have a big advantage, due to the fact that the supply companies have complete organizations throughout the United States, and, in addition, the factories making equipment are in the United States. Freight charges naturally are smaller from the mills in the interior of the United States to American fields, than the American seaboard and thence to South America and finally, inland to the fields.

Quality of Oil

Oil men here generally admit that the quality of the crude oil produced in South America is going to have much to do with determining to what extent it will compete with American oil.

If there is any outstanding tendency with regard to quality, they believe that it is toward a smaller output of light crude in the United States, and a larger in South America, for the future. Oil found at shallow depths, they say, averages, over many fields, higher in quality than oil produced from deep wells. This may be open to argument, however. Peruvian crude is said to rank with Pennsylvania, the best produced in the United States. The bulk of the output of Colombia, so far, is said to compare with Mid-Continent crude in quality, while the bulk of the output of Venezuela has been more comparable with our Gulf Coast crudes.

So long as gasoline is the principal product of crude petroleum, oil having the characteristics of Mid-Continent crude, Peruvian crude or Colombian crude will sell at a premium over the heavier crudes.

South America Underrated

There is doubtless a tendency in the United States at present to underrate the importance of South America as a competitor of the United States as a source of crude for American refineries. Whatever may take place in the future, however, there is a growing impression that the millions now being spent in Colombia, Venezuela, Peru and other South American countries in the development of their oil resources, is in anticipation of a temporary stringency in this country; and therefore, that so far as destructive competition is concerned, American producers having nothing to fear for the present.

GERMAN BROWN COAL AS BASIS FOR BENZINE

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal.

WASHINGTON, Sept. 20.—The oil industry in this country should not be misled by the news that the Standard Oil Co. of New Jersey and the Royal Dutch-Shell group of Great Britain have effected an agreement with the German Gasoline Co., a former Standard property, to manufacture benzine from lignite. In Germany the word "lignite" is used interchangeably with "brown coal," and it is brown coal that is the subject of this agreement for the manufacture of benzine.

In the United States there is nothing that corresponds with the German brown coal, and, while he have vast areas of lignite, that mineral is very different from the brown coal of Germany, and no known process exists here by which any commercial enterprise could be established for manufacturing benzine from our lignite.

The dispatch from Berlin states that this agreement provides for a territorial understanding in the distribution of the new product to be obtained from German lignite, or "brown coal," which it really is. The German company will retain exclusive rights in Germany, the Shell group will take the rest of Europe and the Standard Oil Co. will have all the rights in the Western Hemisphere. The method of the German Gasoline Co. is understood to consist of a distillation of benzine from so-called brown coal or lignite. Under the agreement, a new plant will be erected to make use of the company's distillation process. Capacity is placed at 250,000 tons annually of this manufactured petroleum.

Any calculation based on German experience with brown coal does not necessarily apply to American lignite. American lignite exists in our western states in billions of tons, the deposits being so vast as to almost defy the imagination. North Dakota and eastern Montana contain enormous quantities of this mineral, which also is found in large quantities in Texas. There have been many experiments for the utilization of lignite as a fuel, and it has a value that by further research may place the states that contain this prospective fuel in a class by themselves. Even at this time lignite is taking the place of coal for some purposes, but specialists in this country do not regard it as in any sense commercially adapted to the production of petroleum.

DRILLING IN MORAVIA WILL BE EXTENDED

Washington Bureau, The Oil and Gas Journal.

WASHINGTON, Sept. 20.—The Czechoslovak oil company, "Appolo," Refineria Mineralnych Olejov uc. spol, Bratislava, which owns an oil field and refinery near Hodonin, Moravia, has closed a contract with the Government of Czechoslovakia, according to the terms of which the company is authorized to prospect for oil and exploit 6,000 hectares of land adjoining its present holdings, Commercial Attache James F. Hodgson at Prague reports to the Department of Commerce.

The concession is for 30 years, with the privilege of an additional 10 years at the company's option. As compensation the Czechoslovak Government will receive 5 per cent of the annual gross receipts from the exploitation of the land in question.

The "Appolo" company has already invested 8,000,000 Czechoslovak crowns (or approximately $240,000) in the exploitation of its oil fields at Hodonin. The present output is 50 metric tons of oil a day.

OIL FIRE IN RUMANIA

Oil from one of the Steaua Romana wells flooded the village of Mislea, where it caught fire, the flames spreading to an area 3 miles wide, according to Bucharest reports. The oil, estimated at 40 tank cars hourly, is said to have submerged a smaller village.

Colombia Will Yield Standard N. J. 50,000 Bbls. a Day in 1927

The plan of the Andian National Corp. to double its pipeline in Colombia, South America, to the properties of the International Petroleum Co., controlled by the Standard Oil Co. of New Jersey, through Imperial Oil, Ltd., is made necessary by the development of large production there, says the Wall Street Journal.

To date, the International has drilled 100 wells on its Infantas structure without a failure and with a potential production of 70,000 bbls. daily.

This structure has been proven to the extent of 4,000 acres and its limits have not been defined, so that on the area proven 300 more wells could be drilled on conservative spacing. None of the wells completed so far has reached the greatest depth of the potential oil horizon, while the largest producing well had flush flow of 9,000 bbls. a day.

Two other structures have been proven oil bearing but at such a recent date that development work has not progressed to a point where their size can be defined. The La Cira structure is one of these; it is situated nearly a mile west of Infantas and was located in 1925. It has five completed wells with a total yield of 136 bbls. a day. San Louis structure is about 20 miles southwest and was proven this year. It has 16 rotary rigs drilling. A fourth structure has been partly proven making a total of four structures within a radius of 50 miles.

Installation of the additional pipeline will bring capacity to 50,000 bbls. daily and will entail expenditure of about $6,250,000, to be raised through sale of 625,000 shares of Andian National at $10 a share. As the largest stockholder, International Petroleum will put up most of this money.

The main object in this search for oil is to put more crude behind the numerous large refineries of the Stanard Oil Co. of New Jersey, and its subsidiaries, which require 400,000 bbls. daily. Last year the New Jersey company averaged 197,000 bbls. a day of its own production, about 50 per cent of its needs, with 43 per cent of this in foreign countries. Only a small part of the Colombian production was moved, due to lack of transportation.

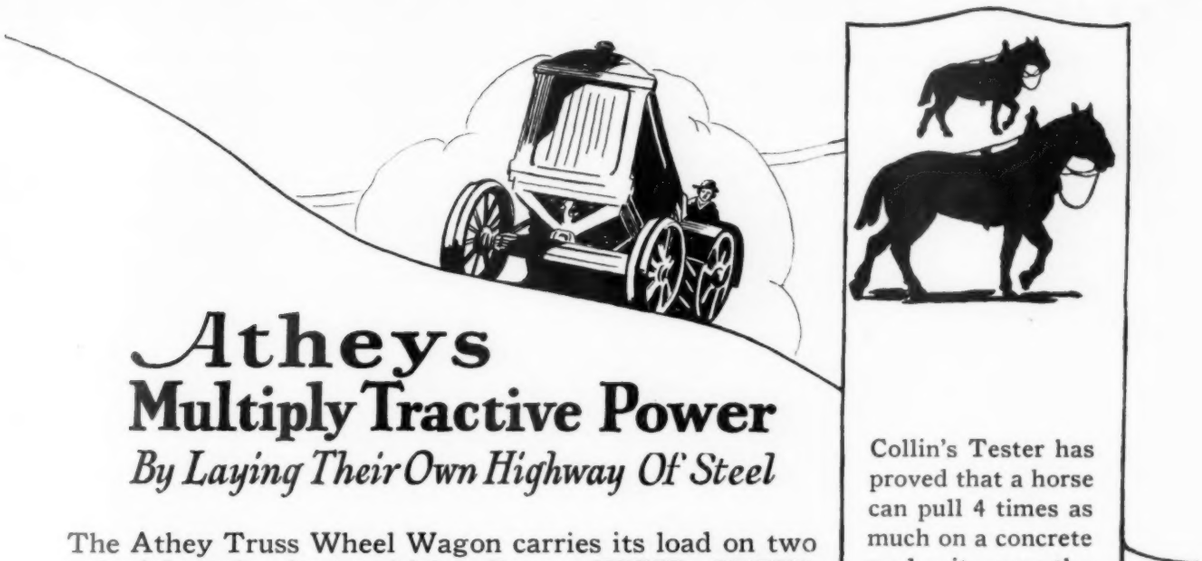
Thus, New Jersey is adding 30,000 bbls. a day of actual crude oil to its supply with the pipeline completed. The additional line capacity will not take nearly as long to install as the pioneering work is finished, so that within a year the New Jersey company will have available 50,000 bbls. daily from Colombia. Andian National moves the oil about 360 miles through its line to seacoast loading stations under a contract with International to move 50,000,000 bbls. from Infantas Field.

JULY COLOMBIAN EXPORTS

The first month's exportation of Colombian crude petroleum (July, 1926), amounted to about 795,000 bbls., of which 706,000 bbls. were exported to the United States, and 89,432 bbls. were exported to Canada. The pumping capacity of the pipeline from the oil fields to Cartagena being at the most only about 558,000 bbls. a month, it is apparent that it was exceeded by July's exportation, the pipeline having been in operation during a part of June, says Consul Lester L. Schnare, Cartagena, in Foreign Trade Notes, No. 106, United States Department of Commerce.

TOO LATE TO CLASSIFY

YOUNG MAN, age 26, married, liberal education, experienced in oil accounting, desires connection with small producing company or individual. Box B-505, The Oil and Gas Journal, Tulsa Okla.



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ATHEY TRUSS WHEEL WAGON
IT BRIDGES THE SOFT SPOTS

Savings Possible in Boiler Operation

Engineer Employed by Eastern Refiners Reduces Operating Costs Without the Installation of New Equipment. Further Decreases Possible

By Herbert A Ross*

For the present I want to have you assume with me that we are the Board of Directors of a large corporation gathered together for the express purpose of determining why we are suffering such tremendous loss in our boiler rooms. I shall use 19 refineries which I have surveyed to construct a composite or theoretical boiler house. I am sure that no fault can be found with comparison of this character and I also have the assurance that I will not incur your displeasure by using your particular plant as a shining example—or otherwise.

Remember, gentlemen, this is a theoretical boiler room we analyze, also that it is constructed from the actual figures, as to capacities and quantities just as you have given them to me. I want you also to understand that the figures or calculations I mention are based, or derived from, positive and definite standards as they are applied to boiler house practice today, and are universally used. No "guess", therefore, enters into the statements I shall make in this connection.

This composite refinery has a total rated boiler capacity of 14,400 horsepower per hour, and based on an equivalent of 30 pounds of steam per horsepower, is capable of generating or producing 432,000 pounds of steam per hour. I may mention here that I have discarded fractional quantities and am using round figures in order that you may follow without unnecessary mental effort.

This boiler house consumes approximately 25 net tons, or 50,000 pounds of coal per hour, at an average cost of about $3.50 per ton. The daily coal consumption is 600 tons, or approximately 12 carloads, and the daily cost of the coal is $2,100. An interesting short tabulation of these quantities per hour, day, month and year is as follows:

	Tons per hr.	Tons per day	Tons per Mo.	Tons per Yr.
Coal Consumed	25	600	18,000	216,000
50-Ton cars	5	12	360	4,380
Cost	$87.50	$2,100.00	$63,000.00	$756,000.00

Note that the yearly coal consumption costs over $750,000. Note also that this cost is for coal alone. No fuel oil, gas, or other combustible is considered, nor is any cost for power purchased included. The amount stated is consumed under the boilers, or in connection with the generation of steam, and not with the stills.

The actual average evaporation in this refinery is 6 pounds of water per pound of coal. Now, mark closely what I am saying—this evaporation of 6 pounds of water per pound of coal is equivalent to 5 pounds of coal per B.H.P. According to the tabulation, we use 50,000 pounds of coal per hour—then dividing this amount by the 5 pounds of coal per B.H.P., we must have developed 10,000 B.H.P. per hour. That we are correct in this assumption is proven by the fact that our equivalent evaporation F. & A. 212 degrees Fahrenheit is 6.3, and this gives us a combined efficiency for the boilers and grates of approximately 45 per cent. This again checks with our calculation as reported, on a basis of coal with a calorific content of 13,500 B.t.u. per pound as fired.

Possible Saving

We estimate from our calculation that simply by changing the method of firing the boilers, it is possible to save $10.76 per horsepower per year and that the total possible saving on 14,400 B.H.P. is $154,940. Understand me, you don't spend a single penny to do this! You must spend effort, however, and I can't emphasize that statement too strongly. Show me a single individual in this audience who would refuse to add this sum to his yearly earnings, and I'll show a counterpart of that little quadruped with long ears, upon which old Balaam did his historical stunt.

Another fact occurs right here that I want to "hammer home," and that is that with proper equipment provided, in order to secure all efficiency possible, an additional $320,624 per year can be saved. This amount, and the previously named sum, make a grand total of $475,564, or nearly $500,000 per year possible saving.

Now, here is where I hope to hit the "bull's eye." I mentioned at the beginning of this talk, I have walked through plant after plant and noted the steam that is wasted to the atmosphere directly, run to the sewer or condensed in large tanks of water, so arranged that the water is continually flowing through them and wasting to the sewer.

I have noticed steam leaks innumerable, uninsulated high and low pressure lines, and hundreds of feet of pipes filled with steam, buried in the cold earth, running in open trenches, or in low spots filled with water. In these very same refineries, I have noted the firemen at the same time working in a very hell of heat, in an effort to hold their pressure of steam, when possibly 20 per cent, or more, of what they were producing was being directly wasted and serving no useful purpose.

When I have attempted in several instances to ask questions as to why so much steam was unnecessarily wasted, I have either been misinformed as to the reason, or have been made to feel that it was none of my business.

Let me ask, what do you cover these things up for if it is a good economical practice? What do you care if the "cock-eyed world" sees the steam that is going to waste? Why should you feel under the painful necessity of excusing yourself, if this practice is either legitimate or correct?

Using Waste Steam

I have often wondered where the fallacy, that steam had no further value after it was once used, ever originated. You raise the roof if your firemen let their safety valves blow only 1 minute, but nothing is said about the other orifices (big and little) that are blowing steam to the atmosphere 24 hours a day, and 365 days in the year.

This refinery wastes approximately 50,000 pounds of steam per hour to the open air or the sewer. This steam has cost at least 50 cents per 1,000 pounds to produce it. Thus direct loss of $25 per hour, $600 per day or $219,000 per year occurs. This amount of money will purchase 62,570 tons of coal, or an equivalent of 1,250 carloads. The rejection of this steam to the sewers carries along with it all condensate at a temperature of at least 210 degrees Fahrenheit from absorption machines, heating coils, etc., and miscellaneous drips. This water is practically a distilled product of the boilers, all impurities have been eliminated. Consider this inconsistency! Water is secured from a stream or from wells, and in every case pumped over the still condensers. This water is absolutely raw, carries all of its original impurities and probably a lot more in addition, gathered from the open condenser box. The only virtue which it possesses is a bit of heat it carries. This is the boiler feed water supply and in order to prevent scale formation in the boilers, we purchase a feed water compound costing anywhere from $50 to $75 per drum and introduce this into the boiler along with the feed water and its impurities, thereby increasing our already high concentration. The direct result of which is a heavily saturated condition of the steam, which is carried over into your stills.

Did you ever stop to think that you could use all of this superior condensate you waste to the sewer, for boiler feed water, and thereby probably save the cost of compounds, and, at the same time, reduce the heavy scale formation in the boilers?

There is another side to the boiler house economics to which I direct your attention, by first asking the question "How much unnecessary power are you wasting through leaking valves and pistons in your pumps and engines?" Do you know that they are tight and in good mechanical condition? Some of our refineries have spent large sums of money for labor and fuel-saving equipment of various kinds. Are they functioning correctly, and are you using them properly and intelligently?

Gentlemen, this is your composite refinery boiler house. It is yours to defend—not mine. Mark you, also, that I have endeavored to be just as conservative in my recommendations of expenditure in them, as I am in my remarks to you today. I have not told one-half that I might, for I have a due regard of the ethics of my profession and my confidential relationship with each one of you. But I feel that I must stress some facts in your assemblage this morning, because some of you seem to have an incorrect idea of my status, in this association. Get this fact, and get it correctly! I am your employe, engaged by you, to advise you how to abate boiler house loss and convert it to profit. I have fulfilled my part of the agreement to just the extent that you have individually co-operated with me. I have been just as careful of the expenditure of your money as I would of my own, and in no case have I advised you to invest a farthing until I had proven the fact that you could save sums just by revision of your firing methods.

Again I say to you, men are here today who are saving a good round sum of money in their boiler house because of our efforts in their behalf, and their own

*Annual meeting National Petroleum Association, Atlantic City, September 16.

OBTAIN EXCELLENT KEROSENE WITH EDELEANU PROCESS IN CALIFORNIA

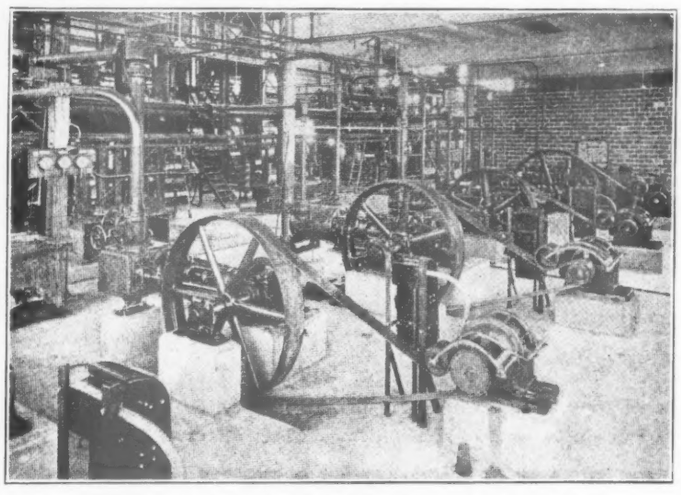
By Robert L. Brandt
Union Oil Co.

About twenty years ago the Rumanian Government directed Dr. L. Edeleanu, then a young university professor, to investigate and develop a method for economically refining burning oils derived from Rumanian crudes that would give a product equal in quality to the best American kerosenes. Conventional processes for the purification of the raw kerosene did not yield a high-grade product from Rumanian crudes, except when excessive amounts of acid were employed and redistillation was resorted to. Such methods, moreover, were prohibitive insofar as cost was concerned. After a considerable amount of research, Doctor Edeleanu selected liquid sulphur dioxide as the best and most practical treating agent for refining kerosene distillate, and the one that would yield the highest grade of product from any crude, and especially from the so-called asphaltic-base crudes.

Accordingly, a small plant was built for treating raw kerosene with liquid sulphur dioxide, and the process at once proved successful in the production of an excellent kerosene. However, many mechanical difficulties presented themselves, and some years were spent before these obstacles were overcome and the process developed to a point where it could be considered a commercial success.

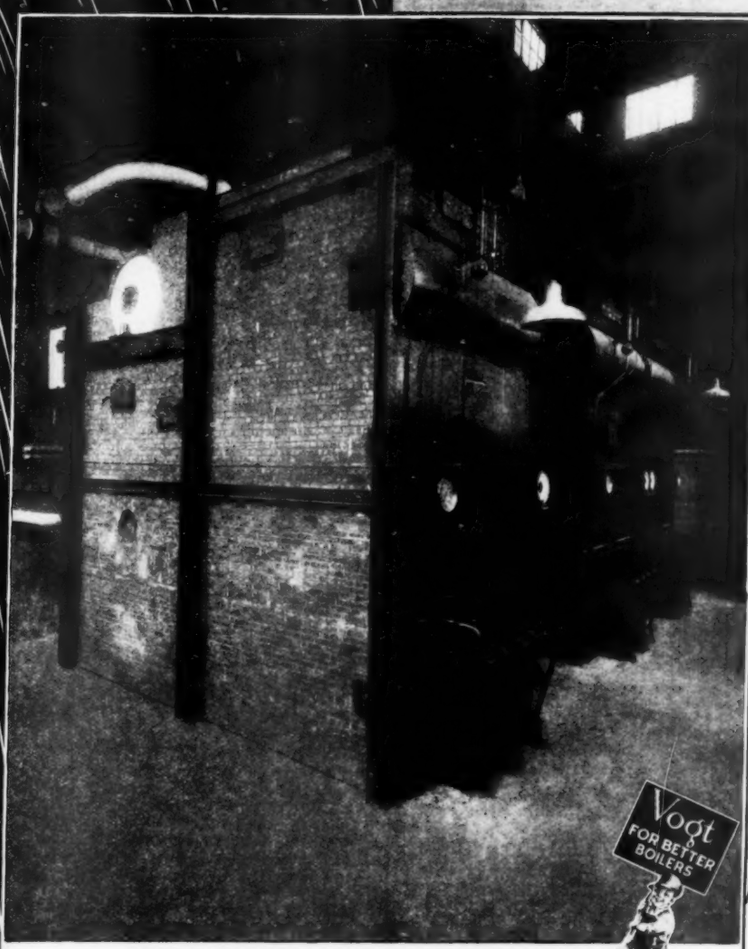
The action of concentrated sulphuric acid on unrefined kerosene is mainly a chemical one. Liquid sulphur dioxide, on the other hand, merely dissolves out the impurities in the unrefined kerosene that are so detrimental to the finished product. This is the basis upon which the Edeleanu process rests. Sulphur dioxide at ordinary temperatures and pressures is a colorless gas that is characterized by an extremely irritating and pungent odor,

(Continued on Page 148)



Edeleanu compressors at the Oleum, Calif., refinery of the Union Oil Co.

For Heat and Power!



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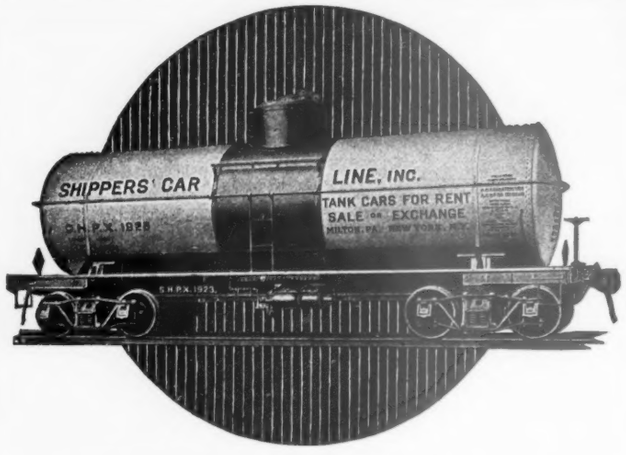

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willingness to co-operate in the plan. Why shouldn't they be boosters for such an economic plan and entertain a high regard for it? This is the first co-ordinated effort which this association has undertaken to avail itself of the economic principles of the boiler house management and operation. Its value to you is a proven fact by the saving already made, or else indicated as possible of attainment. I make no plea for a continuation of the plan, but I do most earnestly desire to sell you the idea. Nor do I stand before you in either defensive or apologic mood.

You engaged me to tell you what was wrong. I assumed you wanted the truth —you now have it. If I have made any errors, they are of the head and not of the heart. This work has been exceedingly arduous because of the complexities of 19 separate organizations. No two problems have been similar in character.

We are gradually getting you into a systematic condition. Yours, not mine, will be the loss if you discontinue or neglect to carry one. Remember this fact, and this warning, heat is the basic factor of your business. Eventually you must conserve it, or be automatically forced out of the running.

Cost of production must be reduced if we hope to continue. This can only be done by intelligent and systematic effort, established on comparative records that are true standards of your particular plant.

In 1849, he average American workman produced $1,000 of new product per year. Today he produces $7,000 worth. In 1869, or 10 years after the first successful oil well was drilled near Titusville, Pa., the workman had about one horse power with which to do his work; today he has three horse power, according to a General Electric Co. statement.

Some statistics were recently published from which I quote a few figures as follows: A little over a year ago this country had only 6 per cent of the world's population and 5.7 per cent of the total world land area. We produced at that time 38 per cent of the world's total coal; 70 per cent of the petroleum and we possess 83 per cent of the automobiles (Fords included). We did this with power. There were a number of other very interesting facts, but I have only quoted in our political economy. If this is true of the country at large, it must be equally so in the oil industry. It, therefore, behooves us to set our house in order.

Now, in conclusion, I want to tell you of two refineries in this association that are operating at a high efficiency; and of one that was, but is not now, operating at a low efficiency. All three of these refineries are saving fuel that represents a handsome return on the effort they have expended. Here are two extremes of conditions, on the one hand modern water tube boilers—on the other, fire tube boilers, that are almost junk. In each case, however, the management is particularly alive to its steam conservation, its production and cost.

It is a great personal satisfaction to your engineer to have an active part in their economic program and to be permitted to cite their accomplishments as concrete examples of what may be done with a little effort, and a proper evaluation of sound engineering principles applied in their plants.

EXCELLENT KEROSENE WITH EDELEANU PROCESS

(Continued from Page 146)

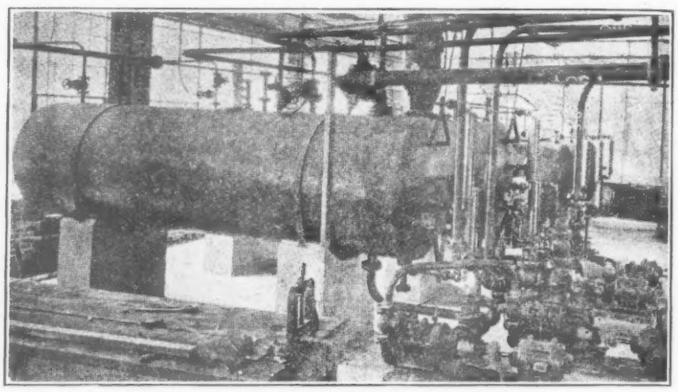
familiarly known as the odor of burning sulphur. By chilling and compressing, the gaseous sulphur dioxide may be liquefied to a pale yellow fluid, which is considerably heavier than water.

Process Described

The Edeleanu process consists essentially of cooling the crude kerosene distillate to about 14 degrees Fahrenheit below the freezing point of water and mixing it with liquefied sulphur dioxide that has previously been cooled to approximately the same temperature. When agitation has been completed the mixture is allowed to settle, when it separates into two portions.

The liquid sulphur dioxide settles to the bottom of the mixing chamber, taking with it in solution the detrimental impurities originally present in the raw kerosene.

The liquid sulphur dioxide containing dissolved impurities is withdrawn and conducted into small steam heated stills which are maintained under vacuum The sulphur dioxide is here driven off as a gas and is collected by means of pumps, purified, chilled and compressed, when it is again liquefied and ready for use upon the fresh charge of unrefined kerosene. The residue left in the stills after the evaporation of the sulphur dioxide is excellent for use as a high-grade fuel oil.



Sulphur dioxide storage tanks at Union refinery.

The treated kerosene containing traces of liquid sulphur dioxide is in like manner heated in stills where the sulphur dioxide is removed as a gas, which is also chilled and compressed and made ready for use again in the liquid condition. The sulphur dioxide is used over and over again, and only a very small amount of loss is encountered during the various handling operations.

The kerosene from which practically all the impurities have been extracted with the liquid sulphur dioxide and from which the SO_2 has been removed is given a final treatment with a small amount of sulphuric acid, neutralized and washed —a treatment that further purifies it and imparts that sparkling, crystal, clear appearance characteristic of well treated kerosene.

Use in America

Although the Edeleanu process had been shown to be commercially feasible at least 12 years ago, it has not been available for use in America until within the last few years. The patents covering the process are held in the hands of a German company, and, due to the world war, nothing was done to promote the use of the process in this country until recently, although it is of interest to note that as early as 1913 and 1914 the Union Oil Co. was in communication with Doctor Edeleanu regarding his process.

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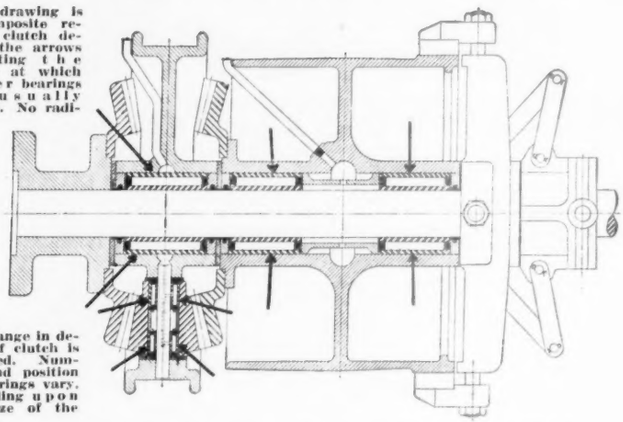

This drawing is a composite reverse clutch design, the arrows indicating the points at which roller bearings are usually placed. No radical change in design of clutch is required. Number and position of bearings vary, depending upon the size of the clutch.

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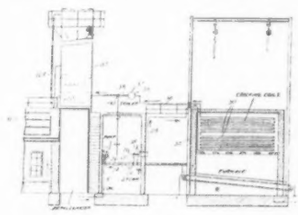
than has previously been marketed can be produced from asphalt-base crudes by the Edeleanu process. The plant at the Oleum refinery of the Union Oil Co. has been erected by the engineering department of the company under the personal supervision of an erection engineer representing the German manufacturers of the Edeleanu machinery. A great part of the equipment is quite complicated in character and requires a high degree of skill and long experience for its proper installation.—Union Oil Bulletin.

Recent Patents

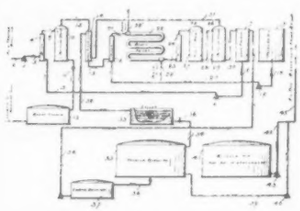
1,591,428. Process and Apparatus for Treating Hydrocarbon Oils. Chauncey Matlock, New York, N. Y., assignor to Gasoline Corp., New York, N. Y., a corporation of Delaware. Filed September 27, 1920. Serial No. 413,020. Twelve claims. (Cl. 196—48).



3. In a method of fractionating vapors of different boiling points, the step which comprises injecting a spray of cooling liquid into a moving stream of said vapors, and diverting a mixture of condensed particles and vapors from said stream in a direction different from the general direction of movement of said vapors.

10. In an apparatus for treating hydrocarbon oils the combination of a furnace, a number of treating pipes in said furnace, means for supplying fluids to said pipes, a header connected to the outlet ends of said pipes, a means for injecting liquid into said header, and means for fractionating the vapors thus cooled.

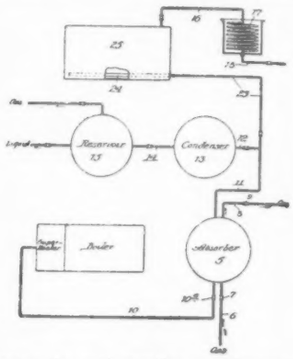
1,592,329. Treatment of Petroleum Products. John C. Black, Destrehan, La., and Wirt D. Rial and Raymond T. Howes, Wilmington, Calif. Filed June 1, 1925. Serial No. 34,024. 5 Claims (Cl. 196—41.)



1. The process of purifying acid treated synthetic or cracked petroleum products having the boiling points of gasoline which consists in treating the products with a relatively weak alkaline solution to partially neutralize the products; in removing the weak alkaline solution; in mixing with the products thus treated a relatively strong alkaline solution and subjecting the mixture to a temperature not exceeding 350 degrees Fahrenheit, while preventing substantial vaporization of the products, to cause the relatively strong alkaline solution to break down gums and gum-forming bodies, in cooling the mixture, in separating the alkaline solution; in mixing the products with a heavier hydrocarbon, and in then distilling the mixture to remove the gum and gum forming bodies.

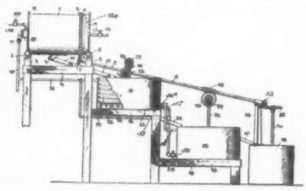
1,594,915. Art of Producing Gasoline. Horace M. Weir, Elizabeth, N. J., assignor to Standard Development Co., a corporation of Delaware. Filed April 8, 1921. Serial No. 459,711. 4 Claims. (Cl. 196—12.)

4. The process of manufacturing gasoline which comprises effecting the absorption of gasoline constituents of a gas in a suitable solid absorbent, subsequently heating the absorbent to drive out the gasoline constituents absorbed therein,



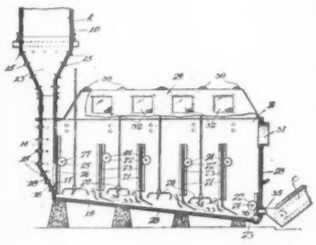
passing the said gasoline constituents in vapor form through a body of heated hydrocarbon oil distillate containing gasoline and heavier constituents and condensing and collecting the vapors evolved therefrom.

1,594,796. Process for Separating Hydrocarbons From Oil-Bearing Earth. George Jewett Rockwell, Huntington Park, Calif., assignor of one-half to Colin Timmons, Los Angeles, Calif. Filed April 10, 1923. Serial No. 631,171. 2 Claims. (Cl. 196—14.)



2. A process for separating hydrocarbons from oil-bearing earth which consists of partially distilling the oil-bearing earth for removal of some of the lighter oils, agitating the materials in the presence of water and steam heat by which oil would be freed from the grains of sand by attrition and gently agitating and heating by steam to permit stratification of the oil, water and sand according to their specific gravities.

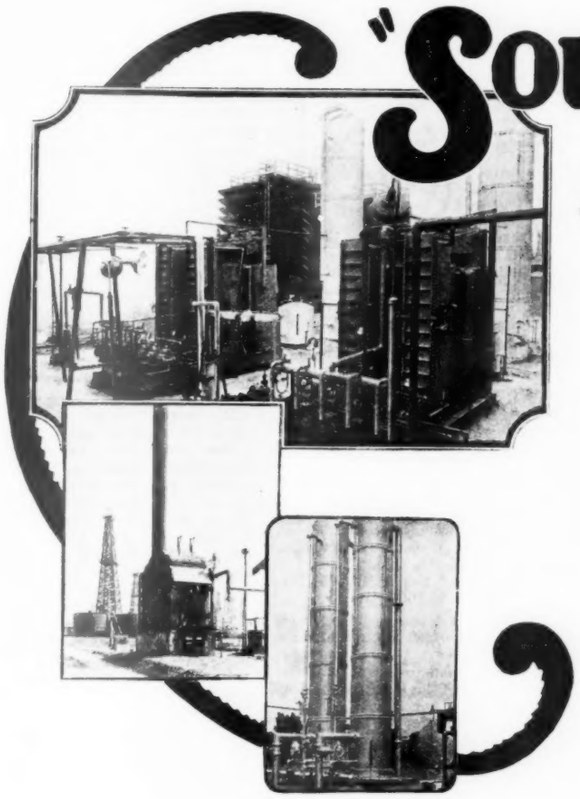
1,592,179. Process for the Separation of Oil From Oil Sands and Other Like Material. Nicholas Shouldice Clarke, New York, N. Y., assignor to Athabasca Oil Products, Ltd., Edmonton, Alberta, Can. Filed July 5, 1923. Serial No. 649,757. 2 Claims. (Cl. 196—14.)



1. The within described process for separating oil from oil sands or the like consisting in heating the sands by subjecting them to the action of a mixture of superheated steam and a suitable gas, then mixing the resultant product with water and separately drawing off the oil and the solid material.

1,596,660. Petroleum Still. Lemuel J. Husted, Los Angeles, Calif., assignor of one-half to F. L. Rounsevell, Los Angeles, Calif. Filed March 4, 1920. Serial No. 363,182. Renewed December 28, 1925. Two claims. (Cl. 196—106.)

1. In a petroleum still, a series of shells having a common axis, a division



"SOUTHWESTERN"
Leads Consistently

First in the field with efficient, compact, portable equipment for the production of gasoline from natural gas, "Southwestern" has consistently maintained this position of leadership through the efficient performance of its various units and complete plants operating under widely varying conditions throughout the principal oil fields of this country.

Bubble cap type apparatus for absorption, distillation, and fractionation, which "Southwestern" was first to manufacture for general use, has forcibly demonstrated its superiority in actual service. This type of equipment, both in general refinery practice and as especially designed for portable service, produces a quality gasoline with maximum economy of fuel and upkeep.

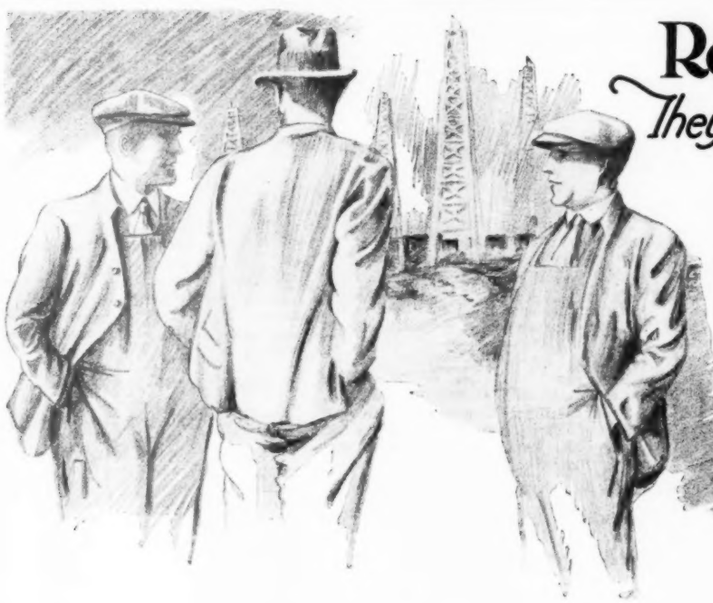
And again—recognizing the demand for a smaller water tube boiler of light weight and low height, "Southwestern" was first with the Collins—a portable water tube boiler which has proved to embody higher economy and greater overload capacity than the ordinary horizontal tubular boiler.

70 "Southwestern" Portable Absorption Plants Now Operating

Southwestern Engineering Corporation
1221 Hollingsworth Building
Los Angeles, California

Factory:	837 Mayo Bldg.,	Branch Factory
Culver City, California	Tulsa, Oklahoma	Tulsa, Oklahoma

Designers and builders of advanced equipment for modern oil country operations.



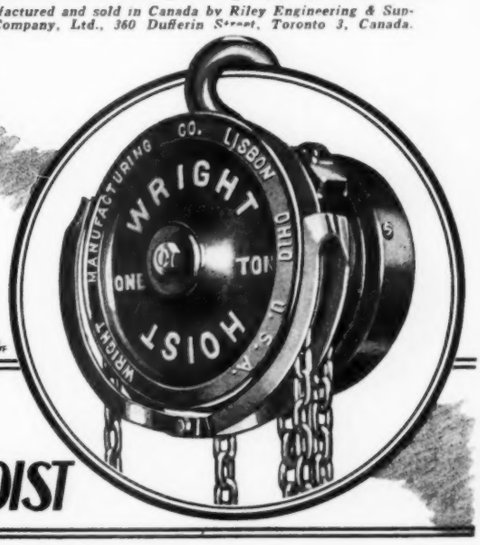
Rookies or Veterans?
They all Look Alike until Put to Work

It takes more than overalls and pipe tongs to make a skilled workman out of a common laborer.
The same is forcefully true in oil and gas field equipment—especially hoists.
The Wright Hoist is well schooled in the requirements of these industries—the mechanism of this super-hoist, supplemented by its especially developed "muscles," makes it *the* skilled mechanic among all other hoists—the only resemblance it bears to the rest is in its appearance when not in action.

Let us tell you ALL about its many points of superiority that issue greater speed, safety and convenience in hoisting.

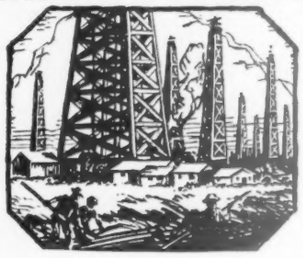
Wright Manufacturing Company, Lisbon, Ohio

Manufactured and sold in Canada by Riley Engineering & Supply Company, Ltd., 360 Dufferin Street, Toronto 3, Canada.



WRIGHT IMPROVED HIGH SPEED HOIST

ASCO
STEEL
STANDS SUPREME



Every step in the production of Asco Steel is watched closely. From the selection of the raw materials to the finished product, the first thought always is to produce a steel that will give the best results to the makers of Oil Well Tools. Can we help you to produce better tools?

DISTRICT OFFICE:
502 Cosden Bldg., Tulsa, Okla.

THE ANDREWS STEEL CO.
NEWPORT ASCO KENTUCKY

OTHER "PENBERTHY" PRODUCTS
Ejectors
Cellar Drainers
Oil Gages
Water Gages
Oil Cups
Grease Cups, Etc.

PENBERTHY PRODUCTS

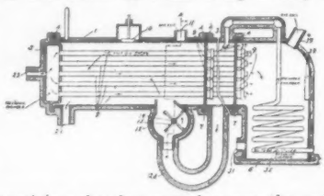
Special High Pressure Automatic Injector

Write For Catalog

Owing to the increasing demand in the oil fields for injectors to operate on higher pressures, this high pressure injector is recommended where boilers are operated at pressures to 200 pounds.

PENBERTHY INJECTOR COMPANY
Established 1886
Canadian Plant: WINDSOR, ONT., CAN.
1260 Holden Ave., DETROIT, MICH.

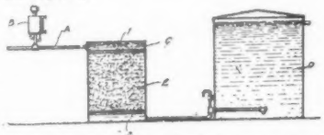
wall between the adjacent ends of each companion pair of said shells, said shells and said division walls secured together, the outer end of one of the end shells of said series of shells being closed, a



receiv'ng chamber spread across the end of said shell, the outer end of the opposite end shell of said series of shells being provided with a discharge chamber, a series of pipes leading from said receiving chamber to said discharge chamber, means to deliver a liquid of a h'gh temperature to said receiving chamber and force it through said series of pipes to said discharge chamber, means to spray crude petroleum upwardly against said pipes, means to conduct the gaseous vapor therefrom and means to drain the residuum from said shells.

1,596,585. Process for Breaking Water-in-oil Emulsions. Melvin De Groote, St. Louis, Mo., assignor to William S. Barnickel & Co., Webster Groves, Mo., a corporation of Missouri. Filed December 23, 1924. Serial No. 757,734. Nine claims. (Cl. 196—4).

1. A process for breaking water in oil emulsions, characterized by establishing contact between the emulsion and particles of a solid non-absorbent material on which a demuls'fying agent is held by adsorption.



8. A process for breaking water in oil emulsions, characterized by establishing contact between the emulsion and particles of commercially pure zinc on which a demulsifying agent is held.

1,596,587. Treatment of Water in Oil Emulsions. Melvin De Groote, St. Louis, Co., ass'gnor to William S. Barnickel & Co., Webster Grooves, Mo., a corporation of Missouri. Filed December 23, 1924. Serial No. 757,736. Two claims. (Cl. 196—4).

1. A process for breaking water-in-oil emulsions, characterized by adding to such an emulsion a mixture composed of a suitable non-saponaceous demulsifying agent and a substance that is capable of form'ng a brine-in-oil emulsion, mixed in approximately equal proportions.

1,596,590. Process for Breaking Petroleum Emulsions. Melvin De Groote, St. Louis, Mo., assignor to William S. Barnickel & Co., Webster, Groves, Mo., a corporation of Missouri. Filed May 29, 1925. Serial No. 33,831. Eight claims. (Cl. 196—4).

4. A process for treating water-in-oil emulsions, characterized by subjecting the emulsion to the action of an hydrophobe oil-soluble treating agent in which has been combined water by the agency of an hydrophobe soap.

TRADE COMMISSION ON RESERVES

According to a recent report of the Federal Trade Commission on national wealth, the life of the petroleum reserve of the country "would seem to be very much limited," but that constant new d'scoveries make estimates of little value. "If the reserve were known it would not be possible to estimate its life, since new mining methods promise an increased production from each well and the cracking process makes possible, if the cost is warranted, a greater percentage of gasoline extraction from crude oil than at present," says the report.

WATER SCARCITY ALSO PANHANDLE HANDICAP

The many natural handicaps encountered in the development of almost every new oil field have been found to a greater extent the Texas Panhandle country, perhaps, than in any other section of the Mid-Continent Field.

The old problem of transportation has, of course, been paramount. When one visits the Hutchinson County area, traveling by automobile over roads that are not roads at all, and sees the tremendous development that is taking place he at once wonders how all of the materials and supplies got there. Everything in sight that has aided in the transformation of this former wild, desolate, almost uninhabited country, into what promises to be one of the world's greatest oil fields, had to be trucked approximately 40 miles from the nearest railroad.

The water problem soon became acute, no water being available excepting from a river and a creek, and this scarcely fit for drilling purposes, much less for human consumption. The creek and river water contained so much lime that brand new boilers in which it was used could operate but a few days before being cleaned out. The resultant shutdowns represented a loss of many thousands of dollars to the producers.

The first company to tackle this problem and actually solve it to the extent of providing a practically unlimited supply of pure water for its exclusive use is the Skelly Oil Co. After exhaustive tests F. J. Sargeant, of the Skelly engineering staff, who has been on the ground in the Panhandle country for about two years, made a water location on the Hale ranch, adjoining the big Schaeffer ranch which the Skelly Oil Co. has under lease.

A total of five water wells were drilled here, each to a depth of 60 feet, where a large supply of pure spring water was found. It was then necessary to lay a 4-inch line from the water station to the drilling oil wells, a distance of 7 miles. Work is now being completed on a 6-inch line paralleling the original line, which will be taken up, and as soon as the larger line is in operation the Skelly company will be able to deliver from 35,000 to 100,000 bbls. of water a day. The water is being run into 35 boilers at present and as a result there are no further shutdowns on the Skelly wells for the purpose of "cleaning out" boilers.

The success of the Skelly water system has resulted, it is understood, in the decision of several other big producing companies in that field to take similar steps. One company is undertaking a rather costly project of this nature and is soliciting water consumers for the purpose of helping defray the huge expense.

REFINERIES IN HUNGARY

There are four large oil refineries and two smaller ones in Hungary. Of the four important refineries, three in 1925 operated at approximately 10 to 15 per cent of their capacity, and the Amer'can company at 30 to 35 per cent. The cause of this curtailed production is said to be a scarcity of capital and a lack of protective duties, in consequence of which Hungarian refineries suffered serious difficult'es in their endeavor to keep up with foreign refineries. The crude oil requirement of the Hungarian refineries have been supplied by Russia almost exclusively during the past three years. There are indications, however, that Poland will secure a cons'derable amount of the trade during the coming year.

INCREASING AUTO OUTPUT

Capacity operation has been resumed by practically all leading automobile manufacturers and several months of heavy production schedules are assured, according to Automotive Industries. "The retail situation is well in keep'ng with the prospective large manufacturing operations," the periodical states.

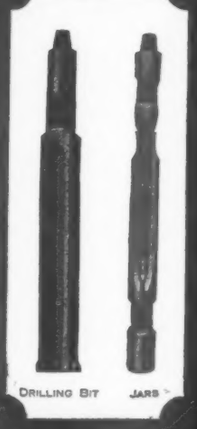
The M. W. Kellogg Company

We are pleased to announce that as a result of commercial tests conducted by the SIMMS OIL CO. to determine the most profitable method of refining and cracking Smackover Crude, we have been awarded contract to design and erect their complete refinery, including a CROSS cracking plant, at Union County, Arkansas.

THE M. W. KELLOGG CO.
7 Dey St.
New York City

BRANCH OFFICES:
700 Baltimore Ave., Kansas City, Mo.
444 Market St., San Francisco, Calif.
1019 Hellman Bank Bldg., Los Angeles, Calif.

LARKIN
DRILLING AND FISHING TOOLS



THE LARKIN LINE includes:

Patent Hook Wall Packer—strongest, safest and most simple self-supporting wall packer on the market;
Special Gas Anchor Packers—with adequate protection of rubber for lowering in well under pressure;
Special Packers—for all types of special services;
Patent Improved Sand Pump—20 feet long, flush outside, of uniform, Cold-Drawn "NATIONAL" Seamless Steel Tubing.
Never-Slip Pipe Grips—least expensive, swiftest and simplest device made for putting in casing.

LARKIN SERVICE includes:

Large stocks, ready for prompt shipment, of all packers known to the trade.
Packers built especially to suit particular requirements.
Complete line of Drilling and Fishing Tools for sale and for rent.

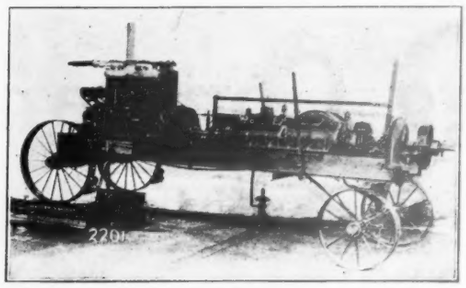
See *The Larkin Line* at any of the leading supply stores.

LARKIN & COMPANY
Butler, Pa., U. S. A.

Our New Catalog No. 30 describes *The Larkin Line* Ask for it now.

SAND PUMPS

PACKERS



TWIN DISC CLUTCHES

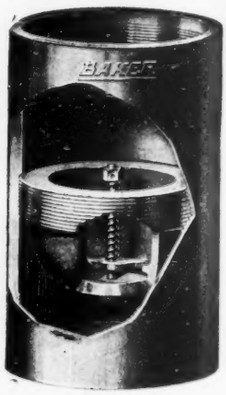
RECORDS made by Twin Disc Clutches in the heavy work done by industrial machines are indications of the long life and faithful service that may be expected in the work of the oil fields.

REPAIR PARTS STATIONS
Buda Engine Service Co., of Tulsa, Tulsa, Okla.
E. George & Co., Broome and Wooster Sts., N. Y. City
James R. Howell, 6715 Quimby Avenue, Cleveland
Coast Machinery Corp., Los Angeles
F. Somers Peterson Co., San Francisco
Motor and Equipment Co., Raleigh, N. C.
Motive Parts Co. of America, Inc.
Chicago, Cincinnati, Des Moines, Indianapolis

TWIN DISC CLUTCH COMPANY
RACINE WISCONSIN

BAKER CASING SHOE CO.

SAFE WHEN THE PRESSURE IS TREMENDOUS



The Baker Float Collar

The internal cast iron plug in the Baker Float Collar is fitted with a cast iron back-pressure valve and the plug is screwed up against a shoulder on the inside of the collar. The shape and fit of the valve inside the coupling are such as to give maximum strength and resistance to tremendous pressures. There is no comparison in safety between the Baker and fragile collars where the float plug is attached to the end of the shoe.

This practical, original Baker device minimizes danger of parting when lowering casing, removes the excessive strain of added weight on the rig and other equipment, and avoids accidents and possible loss of the well. For either long or short casing strings it is safety well worth its cost as only one float collar is required on any string. In the "Plug Method" of cementing, it eliminates the first plug. The circulation is always perfect.

A new folder has recently been issued; mailed upon request.

Mid-Continent Representatives: B. & A. Specialty Co., 404 West First Street, Tulsa, Oklahoma*

BAKER CASING SHOE COMPANY

Export Representatives: Buck & Stoddard 25 Broadway New York City

Box L

Huntington Park, Calif.* Coalinga, California*
George J. Hausen, Inc., Representative, Taft, California*
**Complete stocks carried.*

GULF PORT SHIPMENTS IN JULY SHOWED 1,874,847 BBLS. DECREASE

HOUSTON, Tex., Sept. 18.—A total of 14,889,935 bbls. of refinery products and crude were shipped from the Gulf ports during the month of July, compared with 16,764,782 bbls. in June, or a decrease of 1,874,847 bbls.

Refinery products aggregated 8,838,075 bbls., or 868,884 bbls. less than during June and crude fell off 1,104,963 bbls., or from 7,019,076 bbls. to 6,051,860 bbls.

The Port Arthur-Beaumont district handled 6,566,695 bbls. of the total, or nearly 50 per cent. Refineries and terminals at Texas City and on the Houston ship channel consigned 4,840,860 bbls. The balance originated in the south Louisiana port of Baton Rogue.

The export consignments total 1,783,351 bbls. in July against 2,350,570 bbls. in June, representing a decrease of 567,220 bbls. No crude was sent to foreign ports during July.

The following shows the shipments by each company, except the Sun and Vacuum Oil companies which are omitted this month:

FROM PORT ARTHUR
By The Texas Company
Refined
Coastwise 1,252,518
Export 351,974
Total 1,604,492
Crude
Coastwise 18,045

By Gulf Refining Co.
Refined
Coastwise 2,432,704
Export 106,476
Total 2,539,180

FROM BEAUMONT
By Magnolia Petroleum Co.
Refined
Coastwise *1,066,755
Crude
Coastwise *570,046

*Company makes no distinction between coastwise and export shipments.

FROM ATRECO
By Atlantic Oil Producing Co.
Refined
Coastwise 201,262
Crude
Coastwise 404,341

FROM PORT ARTHUR
By Atlantic Oil Producing Co.
Crude
Coastwise 18,045

FROM SMITH'S BLUFF
By Atlantic Oil Producing Co.
Crude
Coastwise 54,289

FROM NECHES TERMINAL
By Humble Oil & Refining Co.
Crude
Coastwise 90,240

FROM TEXAS CITY
By Humble Oil & Refining Co.
Crude
Coastwise 638,754

By Swiftsure Petroleum Co.
Crude
Coastwise 210,210

By Marland Oil Co.
Refined
Export 53,213
Crude
Coastwise 633,754

FROM BAYTOWN (Refinery)
By Humble Oil & Refining Co.
Refined
Coastwise 705,483
Export 681,336
Total 1,386,819
Crude
Coastwise 644,687

FROM HOUSTON (Pasadena)
By Crown Central Petroleum Corp.
Crude
Coastwise 289,905

FROM HOUSTON (Galena)
By Galena-Signal Oil Co.
Refined
Coastwise 228,000
Export 50,000
Total 278,000

FROM HOUSTON (SINCO)
By Sinclair Oil Refining Co.
Refined
Coastwise 228,280
Crude
Coastwise 427,238

FROM HOUSTON
By Keen & Woolf Oil Co.
Refined
Coastwise 50,000

FROM BATON ROUGE
By Standard Oil Co. of Louisiana
Refined
Coastwise 889,696
Export 540,378
Total 1,430,074
Crude
Coastwise 2,052,306

SUMMARY

Shipments of Refined and Crude by Water from Gulf Ports During July, 1926

Company and Port—	Refined	Crude	Total
The Texas Company, Port Arthur	1,604,492	18,045	1,622,537
Gulf Refining, Port Arthur	2,539,180	.....	2,539,180
Magnolia Petroleum Co., Beaumont	1,066,755	570,046	1,636,801
Atlantic Oil Producing Co., Atreco	201,262	404,341	605,603
Atlantic Oil Producing Co., Smiths Bluff	.....	54,289	54,289
Atlantic Oil Producing Co., Port Arthur	.....	18,045	18,045
Humble Oil & Refining Co., Neches Terminal	.....	90,240	90,240
Humble Oil & Refining Co., Texas City	.....	638,754	638,754
Swiftsure Petroleum, Texas City	.....	210,210	210,210
Marland Oil Co., Texas City	53,213	633,754	686,967
Humble Oil & Refining Co., Baytown	*1,386,819	644,687	2,031,506
Crown Central, Houston	.....	289,905	289,905
Galena-Signal, Houston	278,000	.....	278,000
Sinclair Oil Refining, Houston	228,280	427,238	655,518
Keen & Woolf Co., Houston	50,000	.....	50,000
Standard Oil Co. of Louisiana, Baton Rouge	1,430,074	2,052,306	3,482,380
Totals for July	8,838,075	6,051,860	14,889,935
Totals for June	9,707,959	7,056,823	16,764,782
Difference	868,884	1,104,963	1,874,847
Exports			
The Texas Company	351,947	.....	351,947
Gulf Refining Co.	106,476	.....	106,476
Marland Oil Co.	53,213	.....	53,213
Humble Oil & Refining Co.	681,336	.....	681,336
Galena-Signal Oil	50,000	.....	50,000
Standard Oil Co. of Louisiana	540,378	.....	540,378
Total for July	1,783,350	None	1,783,350
Total for June	2,350,570	53,996	2,404,566
Difference	567,220	53,996	621,216

*Included crude.

SHREVEPORT OIL MEN SUFFER EYE INJURIES

SHREVEPORT, La., Sept. 18.—Two Shreveport oil men recently suffered painful eye injuries caused by flying gravel while returning from oil fields that resulted in the loss of an eye for one and the outcome of the other cannot be determined at this time.

W. N. O'Roark, Standard Oil Co., of Louisiana, scout, and vice president of the Oil Scouts Association of America, was cut in the right eye several weeks ago when a piece of gravel struck the windshield of his car and knocked the shattered glass into his eye. He was returning from the Urania Field when another car passed his, hurling a piece of gravel from the highway as it passed to the windshield of his car.

It was first believed his sight could be saved but a recent examination by specialist in Dallas revealed the injured member would cause the loss of the other eye. The eye was removed and O'Roark is recovering.

A few days ago Charles G. Laskey, junior member of the firm of Belchic and Laskey, Shreveport, producers, was injured in a similar manner. As another car passed his it catapulted a piece of gravel through the windshield of his car. The stone went through an opening of the windshield and struck his eye. He is under the care of physicians. While improving now, physicians said it would require several more days to determine whether the sight in the eye could be restored.

Where ELLIOTT SERVICE begins ..... and ends

Successful coring of wells depends upon many things. Not the least important among these is the core drill itself, of course. It must be right—perfect in its operation in actual service, as evidenced by the results achieved. And to make it so, the manufacturers' effort to serve you as you core your wells must necessarily have dated away back to the original conception of the tool, the proper selection of materials of construction, correct design, and precision manufacture.

That's where "Elliott Service" begins. And from that beginning your first realization of this service is possible. Adequate provision for the speedy delivery of "Elliott-Alco" Core Drills in perfect condition for efficient, successful operation; the assistance of experienced drillers and operators to help you solve any difficult coring problems encountered; intelligent and efficient maintenance of your coring equipment; and the expert knowledge that makes it possible for your crew to take perfect cores successfully and economically; are succeeding steps in "Elliott Service," the value of which might not be fully conceivable until you have experienced the misfortune which results from coring service that is less thorough and efficient.

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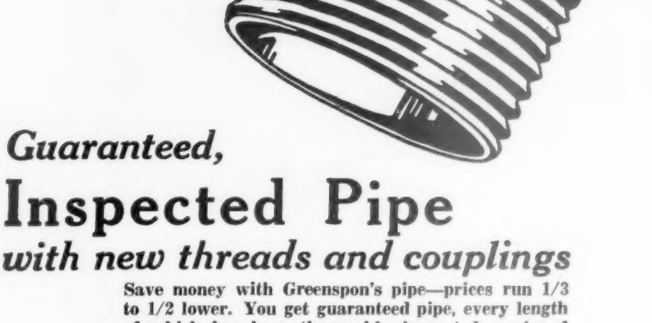

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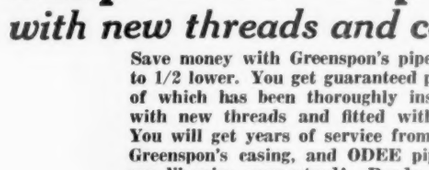

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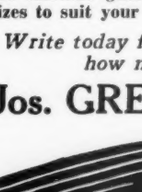

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Made of Drop Forged Steel—"EZEEJOIN" will prove its dependability through many years of service.

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We also manufacture "THE MOTORBLOC"—
an electrically driven chain hoist.

CHINESE BUY BY CUPFUL BUT BURN ENORMOUS QUANTITY OF KEROSENE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Sept. 18.—The political unrest in China is of immense interest to the oil industry because it threatens American exports to the Far East. The Chinese market for American kerosene for many years has been one of the largest, if not the largest single foreign market, for this product.

It is known here that Russian propaganda has made inroads into Chinese political thought and it is believed that the Soviet Government of Russia is indulging in a dream of political conquest of the Celestial Empire whereby bolshevism will rule the 400,000,000 of Chinese subjects. According to reliable information 95 per cent of the native population of China is illiterate, making fruitful soil for bolshevism.

The petroleum trade of China is very largely in the hands of the Standard Oil Co. of New York. That company has acquired real estate for its oil sations in hundreds of locations in China. Industrial activity there has been so pronounced during the last few years, in spite of political dissension and military activity on the part of various Chinese factions, that the value of this real estate has largely increased. It is stated by men of great familiarity with conditions in China that that increase is more than sufficient to permit the Standard Oil Co. to recoup all losses sustained by the unsettling military upheavals that have at times seriously interfered with trade.

An Enormous Consumer

In 1924 the American kerosene trade in China amounted to 177,342,689 gallons to produce which it required approximately 49,677,000 bbls. of crude oil, or a volume equal to the total production of the States of Louisiana, Illinois, Indiana, Kentucky, Colorado, Ohio, New York and Montana during last year.

This increase in our petroleum trade in China has been in spite of the continual civil disturbances which have curtailed all business and which have resulted in a diminution of the purchasing power of the country from coolie to millionaire.

The only explanation of this favorable aspect of the Chinese oil trade is the untiring efforts on the part of the marketing organizations in the face of the odds which it has been necessary to overcome.

Another factor in this increase of trade is that China with four times our own population always has large undisturbed areas in which sales efforts may be concentrated while the more disturbed areas are given merely nominal attention.

America's Superior Position

The most significant fact about the Chinese trade, which a survey of import statistics shows, is the overwhelmingly superior position assumed by American oil in little more than a decade. From 52.6 per cent of the total oil trade of China in 1913 the American participation in this trade has advanced to 70.5 per cent in 1924.

Dutch-Shell Competes

A considerable part of this gain came from the fact that the Asiatic Petroleum Co., which is the largest competitor of the Standard Oil Co., as it is a part of the Royal Dutch-Shell combine, had in recent years obtained an increasingly greater proportion of its supplies from California, rather than from the Dutch East Indies.

The statistics of Chinese trade stated in the foregoing are the latest that have been available in this country.

In connection with our more recent petroleum trade with China, it is of especial interest to note the importance of that trade compared with our trade with Japan, Australia, New Zealand, the Philippines and India. These figures of exports have just been made available and are for the year ending June 30, 1926. They have been compiled especially for The Oil and Gas Journal.

Exports from the United States, fiscal year, 1925-26, with countries of destination:

	Quantity Gallons	Value
Total		$516,608,376
Japan	49,507,114	1,588,307
Gasoline		
Naphtha, etc., total	1,589,551,815	$239,066,839
Japan	14,927,286	2,981,880
China	16,144,628	2,189,616
Australia	75,125,537	17,371,987
New Zealand	37,930,050	9,267,417
Philippines	6,346,480	1,346,990
Kerosene		
Total	886,111,373	87,886,208
Japan	94,192,225	12,533,988
China	106,664,812	14,245,339
Australia	23,372,443	3,796,432
New Zealand	5,357,315	858,490
Philippines	12,835,610	1,941,982
India	65,502,885	4,662,788

Disturbed Political Conditions

The astonishingly large totals of our trade, with the Far East in all commodities, despite the disturbed financial economic and political conditions which prevailed in the principal countries of the Orient during 1925, indicates the importance of that portion of the world to American industry. During 1925 this trade was improved over that of 1924. Exports, with a total valuation of $667,107,000, slightly more than held their own, while imports rose from $957,236,000 in 1924 to $1,368,092,000 in 1925.

Although Japan and China both reduced their purchases of American products, they remained our best customers in Asia. Australia led the markets for American automobiles and China the markets for refined mineral oils.

In view of the fact that the Asiatic Petroleum Co. and Anglo-Dutch Co., is nearly, if not quite, as large as the foremost American importer and distributor of petroleum products in China, a close study of statistics available in this city indicate that this Anglo-Dutch company does quite as much business in China as a whole as any American company. The entrance into China of a number of other American companies is looked upon as bound to increase the percentage of imports from America and it is apparent that the British firm has of late years been drawing heavily upon its California holdings for kerosene supplies for China. Whether Sumatra and Borneo Fields have been undergoing a period of curtailed production or whether their output has been diverted to other markets cannot be definitely ascertained.

Buy By the Cupful

The Chinese market for kerosene presents one of the most interesting examples in the world, of a widespread demand for a product not native to the country, which can be handled profitably only in large volumes and which must eventually be delivered to the consumer in minute quantities through organizations whose network of agencies must be of exceedingly fine meshes in order to capture and hold the trade. Much of the kerosene goes into the hands of consumers in China in tiny cupfuls containing not more than one ounce. When that fact is considered the total Chinese trade in kerosene contributed by the United States amounting to $46,828,855 per annum appears to be stupendous.

Business Conducted Uniformly

The Chinese business in petroleum is conducted in identical ways by all of the older companies. This business is controlled to a very large extent by the home offices of the companies located either in the United States or in Europe. A general manager located in China has deputed to him certain wide discretionary powers, but his actions so far as manipulating prices are concerned are held in check by the simple expedient of the home offices placing minimum prices upon all shipments below which he cannot go without express authority from headquarters.

The bulwark of all China business is credit, without which no line can attain its majority of trade. Granting credit to Chinese on the usual type of native security is apt to be a very precarious business. The oil importers have overcome this obstacle however, by securing instal-

lation sites at various strategic points where large quantities of case and bulk oil may be stored and where it remains their own property until consigned to dealers in nearby vicinities. These dealers, or agents, are all secured by cash deposits, title deeds, the guarantees of other native firms and individuals, but the greatest surety the companies have is the constant foreign supervision exercised by their representatives who are to be found all over China and whose duty is to insist upon weekly or monthly remittances from their agents and to check their stocks as often as possible, at such times compelling payment for all unaccountable shortages.

While 52.6 per cent of all the oil imported into China in 1913 came from the United States in 1922 that percentage was increased to 73.6 per cent and in 1923 to 73.4 per cent and 1924 dropped to 70.5 per cent.

In 1913 20.8 per cent of these imports came from Singapore, Straits, etc., and 18.1 per cent came from Hong Kong.

In 1922 when the percentage of the United States was increased to 73.6 per cent the importations from Singapore, Straits, etc., dropped to 2.8 per cent and Hong Kong to 13.9 per cent. In that year the Dutch Indies furnished 5.8 per cent and French Indo-China .01 per cent.

In 1923 when the American percentage was 73.4, the importations from Hong Kong, 13.4 per cent, from Singapore, etc., 3.4 per cent, and imports from East Indies increased to 8.3 per cent.

In 1924 when the United States imports dropped to 70.5 per cent the imports of kerosene to China from Singapore, Straits, etc., were 3.2 per cent, Hong Kong, 11.9 per cent and South America for the first time came into the field with 2.1 per cent, or 4.606.513 gallons.

It may be generally said that many men familiar with this trade do not regard operations of oil companies in China through an agent with favor. A successful company should have its own selling organization for the handling of large quantities of petroleum involved in their sales. However, there are about 200 firms in the Shanghai district from which agents may be selected.

The Chinese market is too immense to be covered without a huge organization and investment. Small companies desiring to enter it are advised to restrict their activities to localities in which they can maintain organization on the lines followed by the larger firms and retain control through agency connections with properly secured credits so that they may give close personal supervision to their cargo.

As the jobbers or importers have recently been purchasing illuminating oil in lots of from 10,000 to 20,000 cases monthly that practice is opening an opportunity for the smaller oil companies to place their products in the Chinese market, which they could not do, in many instances, if they were obliged to act through organizations of their own.

Answer to Gasoline Inquiry Given By Government Figures

In its current issue, The Lamp, published by the Standard Oil Co. of New Jersey, says:

It is proposed in the Senate that the Federal Government discover through the medium of still another investigating body the answer, available to any newspaper reader in the form of statistics of the petroleum industry collated by the same government, to the question which purports to seek out undue influences affecting the price of gasoline. In reporting publicly that in the seven months since December 1, 1925, American refiners, preparing to meet the demand for gasoline, have depleted pipeline and tank farm stocks of crude in the Mid-Continent Field by 23,896,000 bbls., the Bureau of Mines, Department of Commerce, explains the recent advance in the cost of gasoline to the consumer.

The significance of this is that the consumer is using petroleum at a faster rate than it is being produced and imported and to keep him supplied, crude oil reserves in storage are being drawn upon. These reserves are great but not inexhaustible and the draft on them, while far from foreshadowing any serious shortage, is the signal for advancing prices. Under such circumstances, rising prices are inevitable unless an artificial control of the situation could be interposed. Actually a change in the situation could only result from the advent of a new field or a decline in consumption. Either of these would be duly reflected in Government statistics, immediately operating to eliminate competition, and prices would go down. Here in short is the economics of advancing or receding prices in the petroleum industry. It is the basis of each fluctuation of price in every trading transaction in the world.

Mid-Continent Basic

The Mid-Continent Field, comprising the states of Kansas, Oklahoma, Louisiana, Arkansas and parts of Texas, yields one-half of the domestic petroleum production of the United States and is, therefore, the basic market of American crude. In that vast area, the production of oil is as open to individual effort as is the raising of cattle or wheat. In the long list of accusations which have been leveled at the American petroleum industry, no investigating body has ever found a semblance of unified control in the production of crude. Admission to the ranks of the thousands of wheat and cattle growers in the Mid-Continent Field is the price of a farm, plus machinery, seed, grain or stock, while in the case of oil producers, it is the price of a drilling rig and a lease. It is only because petroleum production is infinitely more hazardous than grain production and the failures more numerous that the rewards of success are commensurately greater.

The novices of yesterday have repeatedly become great producers of today. Nature withholds her petroleum treasure here and gives it freely there, irrespective of status, wealth or experience. She plays no favorites in a business where favors are neither asked nor given. The individual producer is everywhere—sometimes failing, sometimes succeeding. But always, regardless of his fortune, he is directly influencing the price of crude and petroleum products. It is a calling which has no counterpart in modern commerce and one which any man or set of men may enter. It is a business that is unique in that production fosters production. The oil well which increases the available supply of crude immediately necessitates the drilling of other wells, for the protection of the lease upon which it is situated or of adjoining property. A successful wildcat well is the mere beginning of a widening circle of new production.

Excessive Competition

Given commercial production, however, the owner of a well has his choice of scores of market outlets. Refiners compete for his product and the price it commands is established daily by the aggregate offerings balanced against the demand. Excessive competition between refiners may temporarily force prices too high or too low but they inevitably attain the level set by the volume of the raw material available and the current consumption of the products.

In actual practice an increase in the consumption of petroleum products beyond the limits of current petroleum production does not necessarily involve a shortage of crude. In each of the past five years, gasoline prices have declined during the months of heaviest consumption on account of overproduction of crude or because reserve stocks of crude have been drawn upon unwisely, resulting in an oversupply of gasoline and undue competition in its sale. The production of refinable oil last year was not greater than was required to meet the demand for gasoline. Refiners, however, competed with each other in drawing on crude storage to such an extent that, despite a record-breaking remand, the gaso-

55,000 barrels. Angus Texas Refinery, Angus, Texas

Steel Tanks in Stock

Tanks of standard designs and capacities are carried in stock at both Pittsburgh-Des Moines shops—in Pittsburgh and in Des Moines. These are completely fabricated and ready for immediate shipment. Write for prices to the office nearest you.

Special tanks of any size, for any purpose, will be quickly designed, fabricated and shipped to meet any unusual requirements. Consult the nearest Pittsburgh-Des Moines office on any work where tanks or plate work will be included.

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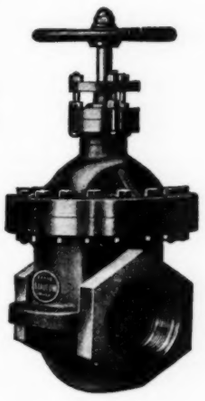

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The very fact that TRIMO TOOLS have been the choice of employers and skilled mechanics for nearly 40 years is the strongest proof of their quality, ruggedness and low final cost. Read the points of superiority of these three leaders.

Trimo Pipe Wrench

Jaws and handle are drop-forged. Unbreakable pressed steel frame. Grips powerfully but releases readily. Nut guards prevent loss of adjustment when working in close quarters. Insert jaw in handle and all parts interchangeable. Made with steel and wood handles.

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Can be used with one cutting wheel and 2 rolls or 3 cutting wheels. Two tools in one drop-forged frame. The new TRIMO Thin Wheel makes a quicker, cleaner cut, with less burr. No thread in frame or roll block to wear out.

Trimo Pipe Vise

Jaws are made of tempered tool steel and have fine-milled teeth which grip the pipe firmly. Yoke, frame and base are of guaranteed malleable iron. Screw, head and handle are of selected steel. Seven standard sizes.

Sold by all plumbing, mill and oil-well supply houses. Demand TRIMO TOOLS —accept no other.

Trimont Mfg. Co.
Roxbury, Mass.

line market was flooded and prices collapsed in the late summer and early fall.

It is of interest to recall that the resolution of Senator Trammell of Florida calling for an investigation of the price of gasoline was then before Congress. Shortly before this, the price had been advanced but Congress adjourned without taking any action on the resolution. Yet with a way open to further advances in a brief period gasoline prices crumbled. A partial recovery has since occurred but it is beyond the power of any petroleum seer to determine whether or not the experiences of the past five years will be repeated in the late summer or early autumn of 1926. It goes without saying that if refiners again oversupply their markets, gasoline prices will break as they did before. If consumption is maintained at the rate of increase indicated for the months covered by available official figures and the production of crude is disappointing, prices will go up. The one definitely ascertainable fact is that the economic forces which produce these results are beyond artifical control. An industry which for five years has experienced a debacle in the prices of its principle products during the season of largest output is at least free from the charge of collusion.

Development Zones Set Out According to Mexican Report

By Charles E. Kern
Washington Bureau,
The Oil and Gas Journal

WASHINGTON, D. C., Sept. 18.—From the Mexican News Bureau in this city comes the interesting information that a special commission of three experts, two representing Mexican governmental departments and one on behalf of the foreign petroleum companies, which has been in session for some time, recently concluded its labors, which were devoted to the delimination of the various zones of oil development. It was decided to establish three such zones—one of the areas within 50 kilometers of the coast; the second, 150 kilometers in width, adjacent to the first, and the third all the remainder of the country. In the first zone the tax on production is to be the highest, because of proximity to shipping points and corresponding low cost of transportation; in the second zone the tax is to be one-half that in the first, while for the interior at great distances from shippings points is still lower. This is for the purpose of encouraging the exploitation of the measures in the regions at a distance from coast ports.

New regulations have been agreed upon and will soon be issued which are designed to prevent the immoderate exploitation of wells, where such exploitation has a damaging effect upon others in the same locality, or where it tends to cause the appearance of salt water in the flow, as has been the case in a number of instances. Included in these regulations will be one establishing the exact distance that must be observed between proposed new wells. The basic purpose of the new decrees is the general conservation of petroleum bearing lands for the greater benefit of all concerned.

Bureau's Production Report

The bureau also announces officially that in the period of 25 years from 1901, down to and including April, 1926, a grand total of 1,345,638,371 bbls. was yielded of a commercial value according to market results, of $1,167,258,519 gold.

In January, 1926, there were 95 wells in process of drilling under the old regulations. At that time the new law went into effect, following which by April the number of new wells commenced had increased in that month and in May had reached 178.

In January, 23 productive wells had been brought in; in February, 27; in March, 34; in April, 33; in May, 38, and during the first 10 days of June the number was 7. The total daily poten-

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EASE, SAFETY and COMFORT
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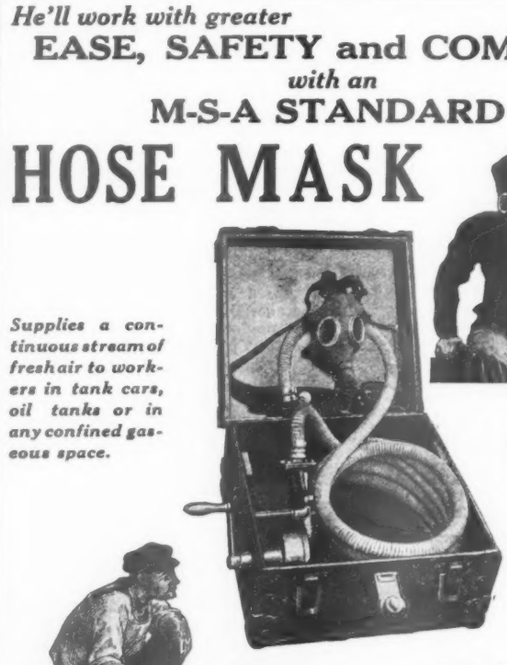
Supplies a continuous stream of fresh air to workers in tank cars, oil tanks or in any confined gaseous space.



Fresh, cool air blowing over the face of the worker enables him to work for long periods in absolute safety.

Standard for the American Gas Association. Send for Bulletin No. 99G for description of M-S-A Hose Masks.

Outside man operating the Blower

Mine Safety Appliances Co.
Braddock Ave & Thomas Blvd. Pittsburgh, Pa.

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Plan to get your share of the big autumn and winter business by advertising in the Classified Section of The Oil and Gas Journal.

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Classified advertising is very reasonable—35 cents a line for the first time and 25 cents a line for each following time. Six words usually make a line.

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Tulsa, Okla.

"America's Greatest Petroleum Publication"

tial production of these new wells was 252,512 bbls.

From these facts, it is officially declared that it is not to be doubted that the petroleum companies operating in the republic consider the provisions of the law satisfactory, hence the general extension of their operations.

During the third week of August, over 100 new wells were in process of drilling in the Tampico region. In that week three new ones were brought in with a total daily capacity of 4,575 bbls. Higher prices than ever before known were being paid by foreign companies to native land owners for the privilege of drilling upon their holdings.

Between July 11 and August 10, 24 new wells were brought in, with a total daily potential capacity of 73,367 bbls. One of these wells has a production of 30,000 bbls., and another of 20,000.

The total number of new wells brought in between January 1, 1926, and August 10, was 225, with a daily potential yield of 870,630 bbls. During the same period in 1925, 191 new wells were brought in, with a total capacity of 560,206 bbls., the increase in the present year under the new regulations thus having been 34 more wells, with 308,524 bbls. greater product.

New Operations

Operations are now under way along the northwestern coast of Lower California, between Tia Juana and Ensenada, for the development of the petroleum deposits which have been located by experienced geologists in that region. It is claimed that the entire locality within the limits named is petroliferous.

A foreign company has secured extensive rights to exploit the petroleum measures known to exist in the vicinity of Cuatro Cienegas, and other points in the State of Coahuila. Several municipalities have granted such privileges to a foreign company said to have large capital, and a comprehensive system of development is to be undertaken, according to reports.

An English company is drilling wells in the vicinity of Pochutla, in the State of Oaxaca, with the expectation of tapping extensive measures of petroleum said to have been located by geologists in the granitic formation of that region.

ELECTRIC DEHYDRATION IN SMACKOVER FIELD

(Cointinued from Page 30)

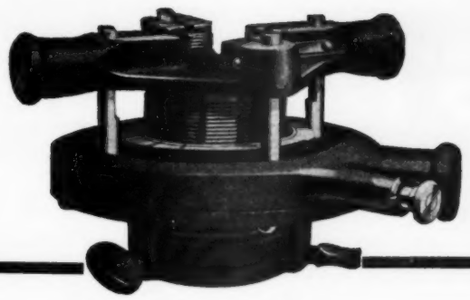
to 11,500 volts before reaching the upper electrode.

When the current is on, the theory is an electric static field is created between the two electrodes. The fluid comes into the tank through an inlet at the bottom and goes up through the center of the lower electrode through a pipe and splashes against the upper electrode. As it is going through the static field the oil and water are separated, the water running down and off the lower electrode to the bottom of the tank while the oil goes on up and out of the tank under pressure through a clean oil outlet at the top. The water is forced from the tank in the same manner. The clean oil goes on over into stock on the other side of the treating plant and is being constantly pumped into the pipelines.

Other companies are adopting the same means of obtaining a greater yield from their leases. The Texas Company, Roxana, Natural Gas & Fuel Corp., and Danciger have dehydrators on their leases. Natural Gas & Fuel Corp. is installing three units in the Urania (La.) Field. At present, Roxana is experimenting in treating the old earthen storage oil through the dehydrators. So far results have been unsatisfactory. The earthen storage has considerable fresh water in it and electric dehydrators will not successfully treat fluid with fresh water in it.

Running Through Boilers

About the same time the Gulf company was installing the electric dehydration plant, the Standard Oil Co. of Louisiana was experimenting with a new system of running fresh production through boilers. That system is proving saisfactory to the



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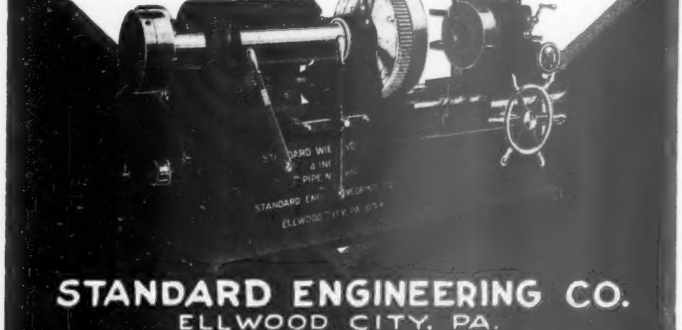

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Standard and all of its leases have boiler plants on them and the inconsistent vat cooking method is being abandoned for treating fresh crude.

The fluid is pumped direct from the wells into a header and chemicals are mixed into it. From there the fluid passes into a separator where the gas is allowed to escape. From there it goes into the boilers and is heated to around 165 degrees going through the salt water in the boiler. From the boiler it goes into the gun barrels and is washed, yielding pipeline oil with 1 per cent or less b.s. content and with a loss of one-half degree in gravity.

The cost of treating b.s. oil in that manner is around 1½ cents per barrel. The equipment used in constructing the plants costs little. Old boilers that had been condemned were taken from the warehouses and placed on the lease. They are never under high pressure and are therefore safe for that use. Fuel is a small item because gas is obtained from the lease and comparatively little fire is required for the boilers. The remaining equipment can be found in warehouses from old equipment being stored there.

After satisfying itself with refined methods in treating fresh production, the Gulf company turned its attention to the reclaiming of crude stored in the huge earthen pits. In the case of pit oil practically all of it is treated with the same basic method, that of cooking it. At present there seems to be a concerted effort among the pipeline and producing departments to get all of their pit oil in steel storage before winter to keep it from being exposed to the elements for another season. Either that or dispose of it through the markets.

All of the companies are treating their pit oil with varied refinements in their cooking plants. Each company has something different at its plant not found in others and each system has its disadvantages as well as advantages. The Simms Oil Co. is meeting with success in heating its b.s. oil to a low temperature and running it into a gun barrel with excelsior in it which serves as a filter for the fluid.

Cooking and Chemicals

The Gulf company is heating its b.s. oil in boilers and then running it into gun barrels. Some of the earthen storage was turned into the pits as pipeline oil but it lost part of its gravity because of exposure and its b.s. content increased. The best oil on top was easily taken off and recovered but the recovery of the bottom pit oil was another problem.

After considerable experimenting the treatment of that oil was a combination chemical and cooking treatment. The fluid is pumped from the pit into a pre-heater or vat with a number of large steam coils in it. In the pre-heater considerable water is bled out of the fluid and the remaining fluid is skimmed from the top and gravitated to a second vat with coils in it which removes more water by the same process.

Pumps pick up the fluid from the second vat and start it into lines running to the two boilers, far removed. As it goes into the line chemicals are mixed into the fluid and the long lines from the vats to the boilers afford a thorough mixing. The boilers are kept almost full of water and the fluid goes into the boiler water and is heated to from 200 to 220 degrees. From there the heated fluid goes into the receiving tanks, approximately full of water.

It goes into the tanks through a flume. The fluid washes through the water and the clean oil goes to the top and the b.s breaks down and goes to the bottom. The clean oil is pumped off and into the cooking vats. The water in the tanks is kept at a desired level by elevating the water outlet pipe as high as the water level. The water outlet pipe originates in the bottom of the tank and the water flows up through the elevated outlet pipe and into a drain ditch and is carried away.

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time. It is running through the vats rather rapidly when compared to other systems and that method is employed to evaporate what little fresh water remained in the oil. When it is coursed through the vats the oil is pumped direct into the pipelines and contains less than 2 per cent b.s.

Fluid treated in this manner contains anywhere from 40 to 80 per cent b.s. Some contains as high as 90 per cent. The gravity of the oil is usually around 17 degrees. Approximately 30 per cent of the total amount of fluid is recovered as pipeline oil without lowering the gravity during the treating process. The pipeline oil is constantly tested and more chemicals are added as needed.

Peculiar Problems

Each pit has its own peculiar problems that have to be worked out. Some pits have so much fresh water in them that a salt water emulsion has to be made before the fluid can be treated successfully. A battery of nine boilers furnish the steam for the pumps, pre-heating vats and cooking vats while two additional boilers are fired on the opposite side of the plant to heat the fluid to 220 degrees.

Nevada in Arkansas and Bellevue, Cotton Valley and Urania in Louisiana are the other fields in the district that produce oil that is hard to treat. Urania crude for the most part is being cooked. Some operators have been successful in sending chemical to the bottom of the well and treating the b.s. out in that manner. The oil from the other fields is cooked.

El Dorado and Caddo crudes are the easiest. El Dorado oil is treated with "percolators," a name given the small heaters in that field. The oil is heated in the flow lines by a slow burning flame in a heater near the gun barrel and the oil percolates into the gun barrels. Most of Caddo oil settles out as will Red River and Bull Bayou crude. Homer and Haynesville crude is treated with chemicals.

CHARACTERISTICS OF THE MARACAIBO BASIN FIELDS

(Continued from Page 77)

been left standing when the well was shut down. With the completion of this remarkable gusher, which undoubtedly constitutes the turning point in the oil industry of Venezuela, a tremendous impetus was given to oil activity in the neighborhood. Thus, the Lago Petroleum Corp. at once started drilling on its Maritime concession in the lake, opposite the little village of La Rosa. The success which attended this well is now historic, and has resulted in about 125 wells having been drilled to date in its immediate vicinity, the resultant production from which, to the close of 1925, amounted to 12,000,000 bbls. exclusive of that of Barroso No. 2.

As previously stated, underground structural contours show this field to be situated on a lobe or spur structure at right angles to the main fold, whose axis lies about 20 kilometers inland. Initially, wells, after passing through the Tar Sands, were brought into production in the so-called La Rosa sand. It was not until the middle of 1925 that a deeper sand, called the Santa Barbara, was discovered. The first well to encounter the new horizon was R. 28, of the Venezuelan Oil Concessions, Ltd. Unfortunately, the well came in out of control, with the result that the gas became ignited from a boiler house some hundreds of yards distant. Several derricks were destroyed, and drilling operations were greatly retarded. Since then, a sand intermediate between the La Rosa and Santa Barbara sands has been discovered, though up to the present it has not been found possible to determine its richness.

The deepest producing wells so far drilled in the La Rosa district only amount to 2,600 feet, and as there is no sign yet of edge water having been encountered, it would appear that the field is capable of considerable extension into

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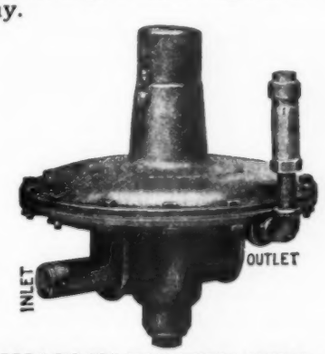

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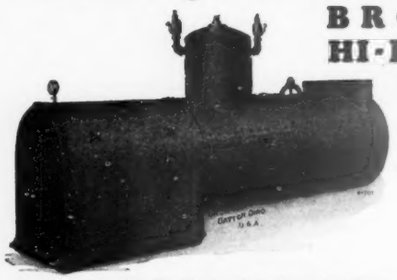

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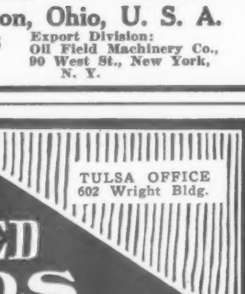

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the lake as well as to the north and southward.

Up to the present the field has been proven over a north and south distance of 6½ kilometers (4 miles) while its greatest east and west development amounts to 2½ kilometers (1½ miles). Within this area no dry holes have as yet been drilled. The wells come in at anything from a few hundred to as much as 15,000 bbls. per day, while gas pressures of over 800 pounds have been recorded. The handling of these big wells calls for considerable skill, since the oil is associated with from 3 to 5 per cent of fine sand. So far, gas separators have not been found very successful, owing to the large volume of sand brought up with the oil, and the wells are therefore allowed to flow into open pits, tubular gas separators being introduced at the end of the flow lines.

La Rosa Field presents a scene of more than usual interest, since most of the wells are situated in the lake. Narrow board walks connect the wells with each other and to the mainland, while the boiler houses are built on piles. From th point of view of transport, wells in the lake enjoy distinct advantages over those on land, especially during the rainy season, but, as drilling proceeds further out into the lake, other problems, such as separating the sand from the oil, will call for careful technical study.

Ambrosio Field

The discovery of the Ambrosio Field reflects highest credit on the geological staff of the Lago Petroleum Corp. The first well in this area was located about 1,300 meters from the shore and at 1,380 feet it came in under tremendous gas pressure, after penetrating the Tar Sands for a few feet. So far, six wells have been brought in within this area, all of which confirm the great richness of the La Rosa sand, below which, so far, no well has been drilled.

The development of the Ambrosio Field presents many interesting problems, since the minimum depth of the lake at this point is 12 feet. The first impression one gains of the Ambrosio Field is suggestive of the Grand Lagoon at Venice, with countless piles driven apparently haphazard, though on nearer approach they are found to be in orderly regularity.

El Mene

This field is situated some 33 miles inland to the eastward of the village of Alta Gracia, on the east shore of the lake, nearly opposite to the city of Maracaibo. One of the greatest difficulties that has to be overcome in the development of this field was that of transport, which during more than half the year was a matter of almost superhuman effort, owing to the swampy nature of the ground. Shortly a narrow gauge track will be completed to the field, after which it should be possible to rapidly extend its development. The topography and scenery at El Mene represent a distinct contrast both to that at La Rosa and Mene Grande, since the country is hilly and broken, and being near the arid zone the vegetation is not so rank as it is further south.

Drilling initially commenced on this field close to the large oil seepage and it would appear that the first interpretation of the structure was that the anticline trended southward from that point. At any rate, the early wells were mostly congregated southward of the seepage, and it was not until well No. 15 was drilled a little to the westward that the first strike of importance was recorded.

Cable tools are exclusively used on this field. Drilling is easy and the wells average from 800 to 1,200 feet in depth, the oil series being about 200 feet thick. The quality of the oil is remarkable, having a specific gravity at 60 degrees Fahrenheit of .850. On distillation by steam it yields about 35 per cent of petrol and 38 per cent of kerosene.

In addition the crude is said to contain about 5 per cent of aromatic bodies, which distill over in the petrol fraction.

The production of El Mene Field to the end of 1925 amounted to approximately 4,400,000 bbls., with about 50 wells in production.

An interesting geological feature of this field is its determination on the north

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by a very well-defined east-west fault. This fault may possibly be the extension of the great fault which passes through the Island of Toas, at the mouth of the narrows leading into Lake Maracaibo.

La Concepcion

The discovery of this field redounds highly to the credit of the geological department of Venezuelan Oil Concessions, Ltd., as there were no surface indications of oil or other rock exposures. Attention was first drawn to the area through its lying topographically at a slightly higher level than the surrounding country, after which numberless pits were dug to a considerable depth. From these, valuable geological information was derived which led to the determination of the structure. The first well drilled more than confirmed the geological forecasts, and the subsequent drilling has extended the field considerably. The oil is of a high grade character, not unlike that at El Mene.

Cable tools are used on the field, and the production is pumped through a 17-mile 6-inch pipeline to the terminal at Punta Piedras, some few miles south of the town of Maracaibo. As indicating the richness of this field a well recently completed, C. 27, came in with a production of 235 tons in the first 35 hours, through a 1-inch flow plug, while well C. 25 produced 75 tons in 7 hours through a 1⅛-inch flow plug.

La Paz

This lies 20 kilometers (12 miles) to the westward of La Concepcion, or 45 kilometers (23 miles) from the town of Maracaibo. The field is characterised by extensive asphalt deposits, which indicate the trend of the structure as running north north-east to south south-west. The character of the oil encountered is heavier than that of La Concepcion, though of a slightly better quality than that of the La Rosa Field. Cable tool drilling is resorted to, and wells with an initial flow of from 200 to 400 tons per day are encountered.

Rio Palmar

This field is situated in the northwest corner of the district of Perija, about 50 kilometers (30 miles) W.S.W. of the La Paz oil field.

Unfortunately the first well, on striking oil, was ordered by the courts to be shut down, owing to its location being outside the area of the concession of the operating company. The well is reported to have come in at a depth of approximately 1,227 feet, and the oil was said to have flowed over the top of the derrick with considerable violence. The litigation which followed the completion of the well has now been happily settled, and it is hoped that this field will before long come in for systematic development.

Rio De Oro

This lies about 75 kilometers (47 miles) W.N.W. of the town of Encontrados on the Catatumbo River in the District of Colon. Drilling was first commenced in 1915, the well having furnished a good production at under 1,100 feet, the gravity of the oil being about 27 degrees Baume specific gravity .892. Several other wells have since been drilled, and the geological information collected points to the structure being of great importance and likely to furnish considerable quantities of oil. Like the Tarra anticline, lying some 63 kilometers (40 miles) to the eastward, its production will probably have to be pumped to Encontrados, from which point it can be handled in barges down the River Catatumbo.

Tarra Field

Situated 50 kilometers (30 miles) S. W. of Encontrados, this field is of special interest since its structure extends into Colombia. Drilling operations have been carried on during the past ten years, the wells being located on the northern end of the anticline, where up to the close of 1925 some 11 wells had been drilled. One at least of these is reputed to be good for 2,000 bbls. a day, the gravity of the oil being about 30 degrees Baume, specific gravity .875. Results so far obtained indicate that the field should furnish a considerable production.

Undoubtedly both the Rio deOro and the Tarra fields are destined to play an important part in the future development

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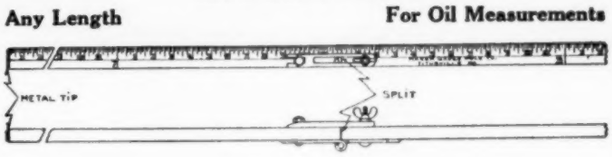

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of the oil industry of the Maracaibo Basin.

Southern Fields

While several prospecting wells are in the course of drilling on structures lying to the south of Lake Maracaibo, no important results have so far been obtained, probably due to the wells having not as yet been carried to a sufficient depth. As stated above, extensive oil seepages occur in this area, which sooner or later will undoubtedly receive close attention and should result in important new fields being opened up.

Transportation

Owing to the mouth of Lake Maracaibo being obstructed by two shallow bars, the shallower of the two permitting vessels drawing only 11½ feet to enter, all oil produced within the Maracaibo Basin area has to be handled in shallow draft tankers, which discharge their burden at some convenient spot outside the lake. The most highly developed ocean terminal is that of the Royal Dutch-Shell group in the Island of Curacao, where, in addition to extensive storage, a large refinery and cracking plant has been erected. The round trip from La Rosa to Curacao and back occupies four days.

The San Nicolas ocean terminal of the Lago Oil & Transport Corp. in the Island of Aruba should shortly be completed. At present the lake tankers of that company discharge their cargo into one of two "mother" or "depot" ships moored off the Island of Aruba, alongside which ocean-going tankers receive their cargo. This arrangement has worked remarkably smoothly since it was first initiated, nearly 800,000 tons having been handled in this way. The round trip from La Rosa to the Island of Aruba takes three days.

Several companies, including the Venezuelan Gulf Oil Co., have acquired ocean frontage on the west coast of the Peninsula of Paraguana.

Venezuelan Production

The remarkable progress in the development of the oil industry of Venezuela is reflected in the accompanying statement, which shows that within the compartively brief space of six years, an annual production of close on 20,000,000 bbls. has been developed.

At the present rate there can be little doubt that the production of the Maracaibo Basin will substantially exceed 30,000,000 bbls. in 1926, and, therefore, place Venezuela as the fifth if not fourth largest producer in the world.

Conclusion

The object sought in this paper has been to give a general presentation of the oil industry in the Maracaibo Basin as it stands today. Already so much development work has been accomplished on the major oil fields that highly informative monographs could be written of each. Similarly, the geology of the area has been so far elucidated that in several districts drilling can now be undertaken on a large scale with every assurance of success. Yet analysis of the successes achieved shows these to have been the outcome of infinitely detailed geological study of the areas in question.

Without the assistance and collaboration of the managers and local staffs of the various oil companies, notably those of the Lago Oil & Transport Co., the Royal Dutch-Shell interests, and the British Controlled Co., this paper could not have been written, and as such the author tenders to them his sincere thanks.

LEGAL

TRIBAL OSAGE OIL LEASES AT PUBLIC AUCTION, SEPTEMBER 30, 1926, BY UNITED STATES GOVERNMENT

September 30, 1926, at Pawhuska, Oklahoma, about 35,580 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual installments, with acceptable security. Within advertised area there are about 9,615 oil wells producing from 1 barrel to 1,000 barrels each, the total daily production for June, 1926, being about 70,000 barrels; also, there are about 135 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for 50 cents each, also logs of producing oil or gas wells for 25 cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

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National Gas Products Co.
Stearns-Roger Mfg. Co.

Filters—Oil—
Burt Mfg. Co.

Fire Extinguishers—
Foamite-Childs Corp.

Fire Extinguishers — Recharge Service—
Foamite-Childs Corp.

Fishing Tools (See Drilling and Fishing Tools)—

Fittings—Dropped Forged Steel—
Vogt, Henry, Machine Co.

Fittings—Forged Steel—
Central Forging Co.

Fittings—Malleable & Cast Iron—
Bovaird Supply Co.
Crane Co.
Frick-Reid Supply Co.
Walworth Co.

Fittings—Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.
Gaso Pump & Burner Mfg. Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Kennedy Valve Mfg. Co.
Metric Metal Works.
Oil Well Supply Co.
Reading Steel Casting Co.
Republic Supply Co.
United Iron Works, Inc.
Victaulic Co. of America.
Walworth Co.

Fittings—Pipe Acid Proof—
Duriron Company.

Fittings—Steel—
Dayton Pipe Coupling Co.
Kerotest Mfg. Co.
Ohio Steel Foundry Co.
Walworth Co.

Flanges—Brass, Iron and Steel—
Jefferson Union Co.
Metric Metal Works.
Walworth Co.

Flange Unions—
Dart, E. M., Mfg. Co.
Gaso Pump & Burner Mfg. Co.

Flashlights—
National Carbon Co.

Floating Roofs and Decks—
Chicago Bridge & Iron Works.

Floodlights—
Pyle-National Co.

Forging Billets—
Andrews Steel Co.
Harrisburg Pipe & Pipe Bending Co.
Heppenstall Forge & Knife Co.

Forgings—
Champion Machine & Forging Co.

Fuel Oil (See Oil—Fuel)—

Fullers Earth—
Sinclair Refining Co.

G

Gas Holders—
Chicago Bridge & Iron Works.

Gaskets—
McCord Radiator & Mfg. Co.

Gaskets—Fibre—
Durabla Mfg. Co.
Garlock Packing Co.

Gas Masks & Safety Appliances—
Mine Safety Appliance Co.

Gasoline—
Crown Central Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Skelly Oil Co.

Gasoline—Natural—
Chestnut & Smith Corp.
National Gas Products Co.
Skelly Oil Co.
Warren Petroleum Co.

Gasoline Plant Equipment—
Bessemer Gas Engine Co.
Clark Brothers Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.
Widdell Engineering Co.

Gas Regulating Casinghead—
Davis, G. M., Regulator Co.
National Gas Products Co.

Gas Scrubbers—
National Gas Products Co.
Newton Process Mfg. Co.

Gauge Glass—High Pressure—
Durabla Mfg. Co.

Gauge Poles—
Marsh Gauge Pole Co.
Missouri Woodworking Co.

Gauges—Automatic Tank—
Brooks Engineering Co.

Gauges—Draft—
Brown Instrument Co.

Gauges—Oil—
Penberthy Injector Co.

Gauges—Pressure and Vacuum—
Bristol Co.
Brown Instrument Co.
Equitable Meter & Mfg. Co.
Metric Metal Works.

Gauges—Test—
Equitable Meter & Mfg. Co.
Metric Metal Works.

Gear Driven Pumps (See Pumps)

Gears—Cut—
Nuttall, R. D., & Co.

Gears—Reduction—
Emsco Derrick & Equip. Co.
Nuttall, R. D., & Co.

Gears—Reverse—
Emsco Derrick & Equip. Co.

Generators—
Westinghouse Electric & Mfg. Co.

Generators—Acetylene—
Oxweld Acetylene Co.

Generators—Turbine—
Moon Manufacturing Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Glassware—Chemical for Laboratory Use—
Illinois Glass Co.

Governors—
Equitable Meter & Mfg. Co.
Gardner Governor Co.

Governors—Boiler Feed—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co.

Grating—Steel—
Blaw-Knox Co.

Grey Iron Castings (See Castings)

H

Hammers—Chipping and Caulking Pneumatic—
Chicago Pneumatic Tool Co.

Hammers—Riveting Pneumatic—
Chicago Pneumatic Tool Co.

Hangers—Iron and Steel—
Continental Supply Co.
Dodge Mfg. Corp.

Hangers—Tubing—
Hercules Tool Co.

Hatches—Gauges and Thief—
Oil Conservation Engineering Co.

Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.

Heat Interchangers—Fluid—
Braun, C. F., & Co.
Ross Heater & Mfg. Co., Inc.

Hoists—Pneumatic, Geared and Universal—
Chisholm-Moore Mfg. Co.
Yale & Towne Mfg. Co.

Hoists—Portable—
Chisholm-Moore Mfg. Co.
Ford Chain Block Co.
Sullivan Machinery Co.
Wright Mfg. Co.
Yale & Towne Mfg. Co.

Hooks for Rods and Tubing—
B. & A. Specialty Co.
Dunn Mfg. Co.

Hose—
Fenwick-Reddaway Mfg. Co.

Hose—Drillers—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Oil Suction and Discharge
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Rubber—
Goodyear Tire & Rubber Co.
United States Rubber Co.

Hypochlorite of Lime—
Mathieson Alkali Works, Inc.

I

Injectors—
Penberthy Injector Co.

Inspectors—Pipe—
Hunt, Robert W., Co.

Insulation Materials—
Celite Products Co.
General Insulating & Mfg. Co.
Johns-Manville, Inc.

Insurance—Fire—
Oil Insurance Association.

Insurance—Tornado—
Oil Insurance Association.

Iron—Ingot—
American Rolling Mill Co.

J

Jacks—Hydraulic—
Bridgeport Machine Co.

Jacks—Lifting—
Templeton, Kenly & Co., Ltd.

Jacks—Pumping—
American Mfg. Co. of Texas.
American Wells Works.
Bessemer Gas Engine Co.
Braden Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Norris, W. C.
Spang & Co.

Jars—
Arbon, Paul, & Co.
Bridgeport Machine Co.
Spang & Co.

Jar Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

K

Kerosene—
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Arco Company, The.
Sherwin-Williams Co.

Lanterns—Electric—
Delta Electric Co.

Lead and Mixed Metal Products—
Eagle-Picher Lead Co.
National Lead Co.

Lead in Oil—
Eagle-Picher Lead Co.
National Lead Co.

Lead Wool and Containers—
Eagle-Picher Lead Co.

Lighting Equipment—
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Litharge—
Eagle-Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
McCord Radiator & Mfg. Co.

Lubricators—
Ajax Iron Works.
Lunkenheimer Co.

Lubricators—Force Feed—
Hills-McCanna Co.
McCord Radiator & Mfg. Co.
Manzel Brothers Co.

M

Machine Tools—
Ryerson, Jos. T., & Sons, Inc.

Manholes—Tank—
Brooks Engineering Corp.

Manifolds—
Reid, Joseph, Gas Engine Co.

Meters—Gas—
Equitable Meter & Mfg. Co.
Foxboro Co., Inc.
Metric Metal Works.
Pittsburgh Meter Co.
Roots, P. H. & F. M., Co.
Westcott & Greis.

Meters—Electric—
Brown Instrument Co.

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil—
Pittsburgh Meter Co.

Molded Goods—Rubber—
Garlock Packing Co.
Goodyear Tire & Rubber Co.

Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipment—
Campbell, J. A.
Cooper, C. & G., Co.
Griscom-Russell Co.
National Gas Products Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.
Westcott & Greis.

Nitrogen—
Linde Air Products Co.

Nozzles—Spray—
Power Plant Equipment Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Field Equipment—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Kaw Steel Construction Co.
National Supply Co.
Oil Well Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Simplex Equipment Co.
Trumble Gas Trap Co.

Oil—Fuel—
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The.

Oil—Gas—
Crown Central Petroleum Corp.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The.

Oil—Lubricating—
Barnsdall Refining Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Skelly Oil Co.
Texas Company, The.

Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.
Skelly Oil Co.

Oiling Devices—
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, Wm. S., & Co.

Oil Well Cementing—
Halliburton Oil Well Cementing Co.

Oil Well Tools—
D. & B. Pump & Supply Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Meier, E. C., Lubricating Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.
United States Rubber Co.

Packing—
Crane Packing Co.
Durabla Mfg. Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.

Packing—Metallic—
Crane Packing Co.
Garlock Packing Co.

Paints—
Aluminum Co. of America.
American Asphalt Paint Co.
Arco Company, The.
Detroit Graphite Co.
Dixon, Joseph, Crucible Co.
Du Pont de Nemours, E. I. & Co., Inc.
Eagle-Picher Lead Co.
Eclipse Paint & Mfg. Co.
Hill, Hubbell & Co.
National Lead Co.
Sherwin-Williams Co.
St. Louis Surfacer & Paint Co.

Pipe—Cast Iron—
Greenspon's Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe & Fdy. Co.

Pipe—Lead Chemical and Antimonial—
Eagle-Picher Lead Co.
National Lead Co.

Pipe—Steel—
Central Tube Co.
Continental Supply Co.
Greenspon's Jos., Sons Iron & Steel Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Murray Tool & Supply Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
Ryerson, Jos. T., & Sons, Inc.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Taubman Supply Corp.
Wheeling Steel Corp.

Pipe—Wrought Iron—
Byers, A. M., Co.
Frick-Reid Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Oil Well Supply Co.
Reading Iron Co.
South Chester Tube Co.
Superior Tube Co.
Taubman Supply Corp.

Pipe and Nipple Threading Machines—
Bignall & Keeler Mch. Works.
Cox & Sons Co., The.
Landis Machine Co.
Ryerson, Jos. T., & Sons, Inc.
Standard Engineering Co.

Pipe Clamps (See Clamps—Pipe)

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Coatings—
Hill, Hubbell & Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.

Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Straightening Machines—
W-K-M Co., Inc.

Pipe Suspension Device—
Stearns-Roger Mfg. Co.

Pipe Threaders—Power—
Williams Tool Corp.

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works.
Ridge Tool Co.
Walworth Co.

Piping—Fabricated—
Midwest Piping & Supply Co.

Piping—Hard Rubber—
United States Rubber Co.

Piping—Steel & Iron—
Crane Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Power Piping Co.

Pistons—
Guiberson Corp.
Hepenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Sulsh Pump—
Guiberson Corp.

Plugs—Bottom Water—
Guiberson Corp.

Pre-Heaters—
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Preservatives—Asphalt—
American Asphalt Paint Co.

Pulleys—Wood, Iron and Steel—
Continental Supply Co.
Dodge Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.

Pumpers—Long Stroke—
Farley Machine Co.

Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.

Pumping Equipment—
American Well Works.
Axelson Machine Co.
Byron Jackson Pump Mfg. Co.
D. & B. Pump & Supply Co.
Farley Machine Co.
Goulds Pumps, Inc.
Jones, S. M., Co.
Myers, F. E., & Bros., Co.
Northrup Equipment Co.
Oil Well Supply Co.
Prescott Co.
Ratigan, J. P., Co.
Waukesha Motor Co.

Pumping Gear Units—
Nuttall, R. D., & Co.

Pumping Powers—
Bessemer Gas Engine Co.
Buda Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Marion Mch., Fdy. & Supply Co.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumps—Acid Proof—
Duriron Company.

Pumps—Boiler Feed—
Axaj Iron Works.
Byron Jackson Pump Mfg. Co., Inc.
Fairbanks-Morse & Co.
Gardner Governor Co.
Goulds Pumps, Inc.
Oil Well Supply Co.
Smith Separator Co.

Pumps—Centrifugal—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Fairbanks-Morse & Co.
Goulds Pumps, Inc.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Direct Driven—
Bessemer Gas Engine Co.
Smith Separator Co.

Pumps—Electric—
Prescott Co.
Smith Separator Co.

Pumps—Fuel Oil Service—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Smith Separator Co.

Pumps—Fuel Oil Transfer—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.

Pumps—Gasoline and Oil for Filling Stations—
Gilbert & Barker Mfg. Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.
Smith Separator Co.

Pumps—Hot Oil—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Goulds Pumps, Inc.
Smith Separator Co.

Pumps—Pipe Line—
Byron Jackson Pump Mfg. Co., Inc.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.

Pumps—Portable—
Gaso Pump & Burner Mfg. Co.

Pumps—Power—
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Prescott Co.
Smith Separator Co.
Waukesha Motor Co.

Pumps—Refinery—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Northern Fire Apparatus Co.
Smith Separator Co.

Pumps—Rotary—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Roots, P. H. & F. M., Co.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.
Smith Separator Co.

Pumps—Slush—
Gardner Governor Co.

Pumps—Steam—
Fairbanks-Morse & Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Prescott Co.
Smith Separator Co.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.

Pumps—Water—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Prescott Co.
Smith Separator Co.

Pyrometers—
Brown Instrument Co.
Republic Flow Meters Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Ratchet Reamers—
Nye Tool & Machine Works.

Ratchet Stocks and Dies—
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Equitable Meter & Mfg. Co.
Metric Metal Works.

Refinery Equipment—
American Radiator Co.
Blaw-Knox Co.
Braun, C. F., & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works.
Graver Corp.
Griscom-Russell Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Appliance Co.
Petroleum Iron Works Co.
Power Piping Co.
Power Specialty Co.
Reid, Joseph, Gas Engine Co.
Ross Heater & Mfg. Co., Inc.
Ross-Meehan Foundries.
Smith, A. O., Corp.
Smith Separator Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.
United Iron Works, Inc.
Universal Oil Products Co.
Vogt, Henry, Machine Co.
Walsh & Weidner Boiler Co.
Westcott & Greis.
Widdell Engineering Co.

Refractories—Furnace, Stills and Baffles—
National Gas Products Co.

Refrigerating Machinery—
Carbondale Machine Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Regulators—
Fisher Governor Co.
Gilfillan Machine Works.
Smith Separator Co.

Regulators—Gas—
Chaplin-Fulton Mfg. Co.
Davis, G. M., Regulator Co.
Equitable Meter & Mfg. Co.
Fisher Governor Co.
Metric Metal Works.
National Gas Products Co.
Smith Separator Co.

Rental Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Irons—
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

Rod Guides—
Meier, E. C., Lubricating Co.

Rods—Gauge—
Missouri Woodworking Co.

Rods—Polish—
Jones, S. M., Co.

Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Jones, S. M., Co.
Sheffield Steel Corp.

Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D. & B. Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Sheffield Steel Corp.

Rods—Valve—
Jones, S. M., Co.

Roofing—Asbestos—
Johns-Manville, Inc.

Roofing—Galvanized Iron—
American Rolling Mill Co.

Rope Socket Metal—
Eagle-Picher Lead Co.

Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.

Rope—Wire—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Bridgeport Machine Co.
Broderick & Bascom Rope Co.
International Supply Co.
Jarecki Mfg. Co.
Wickwire-Spencer Steel Corp.
Leschen, A., & Sons, Rope Co.
Williamsport Wire Rope Co.

Rotary Bit Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Rotary Drilling Equipment—
Emsco Derrick & Equip. Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.

Rotary Lines (See Rope—Wire)—

Rotary Post—
Reed Roller Bit Co.

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.

Rust Preventatives—
Dearborn Chemical Co.
Eagle-Picher Lead Co.

S

Sand Lines—Manila—
Ajax Rope Co., Inc.
Plymouth Cordage Co.

Sand Lines—Wire—
Ajax Rope Co., Inc.
Broderick & Bascom Rope Co.
Hazard Mfg. Co.
Wickwire-Spencer Steel Corp.

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws Temper—
Burns Tool Co.

Securities—Oil—
Pforzheimer, Carl H., & Co.

Separators—Centrifugal—
Miller, Max B., & Co.

Separators—Gas and Oil—
Smith Separator Co.

Separators—Steam—
Volz Engineering Equipment Co.

Sheet Lead—Chemical and Antimonial —
Eagle-Picher Lead Co.

Sheets—Corrugated, Black and Galvanized—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Byerson, Jos. T., & Son, Inc.
United Alloy Steel Corp.

Sheets—Iron—
American Rolling Mill Co.

Sheets—Steel—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Sheffield Steel Corp.
United Alloy Steel Corp.

Shingles—Asbestos—
Johns-Manville, Inc.

Sliding—Galvanized Iron—
American Rolling Mill Co.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Smoke Stacks—
Donovan Boiler Works.

Snuffers—Fire—
Simplex Equipment Co.

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Sockets—Sucker Rod—
Guiberson Corp.

Sockets—Swivel—
Arbon, Paul & Co.

Sockets—Wire Rope—
Chicago Steel Foundry Co.

Soda Ash—
Mathieson Alkali Works, Inc.

Soda—Caustic—
Mathieson Alkali Works, Inc.

Solders—Bar and Wire—
Eagle-Picher Lead Co.
Hoyt Metal Co.

Spark Plugs—
Mosler Metal Products Corp.

Spears—
Acme Fishing Tool Co.
Brown Tool Co., Inc.

Sprockets—Power Transmission—
Ajax Iron Works
Chain Belt Co.

Stands—Vice—
Nye Tool & Machine Works

Steel—All Kinds—
Ryerson, Jos. T., & Son, Inc.

Steel—Alloy—
Central Steel Co.
Timken Roller Bearing Co.
United Alloy Steel Corp.

Steel—Bit—
Central Steel Co.
United Alloy Steel Corp.

Steel—Hot Rolled Strip—
Central Steel Co.

Steel—Special—
Andrews Steel Co.
Central Steel Co.
United Alloy Steel Corp.

Steel Fabricators—Structural—
Austin Co.
Braden Co.
Graver Corp.
International Derrick & Equipment Co.

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Steel Plate Construction—
Chicago Bridge & Iron Works
Graver Corp.
Kaw Steel Construction Co.
Pennsylvania Engineering Works
Petroleum Iron Works Co.
Vogt, Henry, Machine Co.

Steel Wheel and Tug Rims—
International Derrick & Equipment Co.

Stills—
Blaw-Knox Co.
Graver Corp.
Kaw Steel Construction Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
Smith, A. O., Corp.
Vogt, Henry, Machine Co.
Widdell Engineering Co.

Stocks and Dies—
Borden Co.
Nye Tool & Machine Works
Toledo Pipe Threading Machine Co.

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sulphuric Acid—
Eagle-Picher Lead Co.

Superheaters—Steam—
Power Plant Equipment Co.

Swabs—
Arbon, Paul, & Co.
Burt Corporation
Guiberson Corp.
Simplex Equipment Co.

Swedge Nipples—
Dresser, S. R., Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Line Equipment—
Brooks Engineering Corp.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tachometers—
Brown Instrument Co.

Tank Equipment—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Tanks—Bolted—
Butler Mfg. Co.
Columbian Steel Tank Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Butler Mfg. Co.
Graver Corp.

Tanks—Cylindrical—
Graver Corp.
Petroleum Iron Works Co.

Tanks—Elevated Steel—
Chicago Bridge & Iron Works
Graver Corp.

Tanks—Field Storage—
American Car & Foundry Co.
Donovan Boiler Works
Graver Corp.
Kaw Steel Construction Co.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Graver Corp.
Kaw Steel Construction Co.
Maloney Tank Mfg. Co.

Tanks—Run Down—
Chicago Bridge & Iron Works
Donovan Boiler Works
Graver Corp.
Kaw Steel Construction Co.
Newton Process Mfg. Co.

Tanks—Steel Storage—
Chicago Bridge & Iron Works

Tanks—Truck—
Butler Mfg. Co.
Columbian Steel Tank Co.

Tanks—Underground—
Butler Mfg. Co.
Gilbert & Barker Mfg. Co.
Graver Corp.
Kewanee Boiler Co.
Pittsburgh-Des Moines Steel Co.

Tanks—Welded—
Chicago Bridge & Iron Works
Graver Corp.
Pennsylvania Engineering Works

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.
States Engineering Co.

Thermometers—Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Brown Instrument Co.

Thermometers—Resistance—
Brown Instrument Co.

Threading Machines—
Bignall & Keeler Machine Wks.
Cox & Sons Co., The
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly-Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs —
Bridgeport Machine Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing—
Dunn Mfg. Co.
Guiberson Corp.

Tongs—Chain Pipe—
Armstrong Bros. Tool Co.
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Rotary—
Dunn Mfg. Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tongs—Tubing—
Dunn Mfg. Co.

Tool Chests—Pipe—
Nye Tool & Machine Works

Tool Joints—
Bridgeport Machine Co.
Federal Supply Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Reagan Forge & Engineering Co.

Torches—
Oxweld Acetylene Co.

Towers—
Graver Corp.

Tractors—
Cleveland Tractor Co.
International Harvester Co. of America.

Trailers—
Spencer Trailer Co.

Transmission Belt—Rubber—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Reagan Forge & Engineering Co.
Wright Mfg. Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
Ford Motor Co.
General Motors Truck Co.
Graham Brothers
International Harvester Co. of America

Tubes—Boiler, Charcoal Iron—
Byers, A. M., Co.
Reading Iron Co.

Tubes—Boiler Steel—
Continental Supply Co.
National Tube Co.
Ryerson, Jos. T., & Sons, Inc.

Tubing—
Babcock & Wilcox Tube Co.
Byers, A. M., Co.
Central Tube Co.
Continental Supply Co.
National Tube Co.
Pittsburgh Steel Products Co.
Reading Iron Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Wheeling Steel Corp.

Tubing Catchers—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Protectors (See Rod Guides)—

Tubular Goods—
Babcock & Wilcox Tube Co.
Central Tube Co.
Continental Supply Co.
Oil Well Supply Co.
Pittsburgh Steel Products Co.
Republic Iron & Steel Co.
Spang, Chalfant & Co., Inc.
Wheeling Steel Corp.

Tubular Goods—Wrought Iron—
Byers, A. M., Co.
Reading Iron Co.

Turbines for Lighting Equipment
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

U

Underreamer Body Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Brown Tool Co., Inc.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Central Forging Co.
Dart, E. M., Mfg. Co.
Jefferson Union Co.

V

Valuations—
American Appraisal Co.

Valves—Blow-Off—
Homestead Valve Mfg. Co.
Merco Norstrom Valve Co.

Valves—Brass & Bronze—
Homestead Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Cast Steel—
Chapman Valve Mfg. Co.
Homestead Valve Mfg. Co.
Walworth Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co.
Lunkenheimer Co.
Walworth Co.

Valves—Drop Forged Steel—
Edwards Valve & Mfg. Co.
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Chapman Valve Mfg. Co.
Crane Co.
Darling Valve & Mfg. Co.
Kennedy Valve Mfg. Co.
Kerotest Mfg. Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Murray Tool & Supply Co.
Powell, Wm., Co.
Walworth Co.

Valves—Iron—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Merco Nordstrom Valve Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Metal Pump—
Durablu Mfg. Co.

Valves—Pump—
Garlock Packing Co.
United States Rubber Co.

Valves—Relief—Supersensitive—
Davis, G. M., Regulator Co.

Valves—Steel—
Chapman Valve Mfg. Co.
Edward Valve Mfg. Co.
Kerotest Mfg. Co.
Lunkenheimer Co.
Metric Metal Works
Powell, Wm., Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Tank Vent —
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Valves—Working Barrel—
Atlas Ball Co.
Axelson Machine Co.
D&B Pump & Supply Co.

Hough, Charles N., Mfg. Co.
Northrup Equipment Co.
Oil Well Supply Co.

Varnishes—
Arco Company, The
Detroit Graphite Co.
Sherwin-Williams Co.

Ventilators—Roof—
Burt Mfg. Co.

Vises—Bench—
Nye Tool & Machine Works

Vises—Pipe—
Nye Tool & Machine Works

Vises—Post—
Nye Tool & Machine Works

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems—
Power Plant Equipment Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus—
Oxweld Acetylene Co.

Welding Machines—Electric—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Wilson Welder & Metals Co.

Well Shooting—
Eastern Torpedo Co.
Kinley, M. M.
Zero Hour Torpedo Co.

Wheels—Pipe Cutter—
Nye Tool & Machine Works

Winches—
Braden Co.
Brooks Engineering Co.
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel—

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
D&B Pump & Supply Co.
D. & N. Specialty Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor, Working Barrel Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Wrenches—Closet Spuds—
Nye Tool & Machine Works

Wrenches—Drop Forged—
Williams, J. H., & Co.

Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.
Nye Tool & Machine Works

Z

Zinc Oxide—
Eagle-Picher Lead Co.

Oklahoma-Kansas and Eastern Pipeline Report

OKLAHOMA-KANSAS PIPELINE STATEMENT FOR JULY

Runs

	Month	Daily Av.
*Prairie Pipe Line Co.	4,061,000	131,000
Gulf Pipe Line Co.	1,294,335	41,753
Texas Pipe Line Co.	620,352	20,011
Magnolia Pet. Co.	1,197,214	38,620
Empire Pipe Line Co.	701,728	22,636
Cosden Pipe Line Co.	798,341	25,753
Sinclair Pipe Line Co.	1,817,530	58,630
*Other lines	7,731,000	251,000
Total July	18,271,500	589,403
Total June	17,014,842	567,161
Difference	1,256,658	22,242

Shipments

	Month	Daily Av.
†Prairie Pipe Line Co.	4,234,294	136,590
Gulf Pipe Line Co.	1,112,450	35,886
Texas Pipe Line Co.	748,852	24,157
Magnolia Pet. Co.	1,548,204	49,942
Empire Pipe Line Co.	817,578	26,373
Cosden Pipe Line Co.	841,880	27,157
†Sinclair Pipe Line Co.	2,515,377	81,141
*Other lines	7,967,000	257,000
Total July	19,785,635	638,246
Total June	19,357,803	645,260
Difference	427,832	7,014

Stocks

*Prairie Oil & Gas Co.	27,450,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line and Gypsy Oil	6,582,110
The Texas Company	2,978,951
Magnolia Pet. Co.	4,136,562
Empire Pipe Line Co.	2,620,291
Cosden Pipe Line Co.	1,875,424
*Sinclair Crude Oil Purchasing Co.	18,000,000
Carter Oil Co.	12,708,112
*Other lines	9,300,000
Total July	87,649,450
Total June	89,443,202
Difference	1,793,752

*Estimated.

†Prairie shipments include Texas crude oil. Sinclair shipments include Texas and Wyoming crude oil.

Note: Stocks do not include 4,800,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipelines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July.

	June, '26	July, '26
Nat. Transit	169,062.33	163,355.48
S. W. Pa. Pipe	96,302.81	101,686.03
Eureka Pipe	388,529.04	392,989.67
Buckeye P. L. (Macksburg)	317,931.59	306,269.80
Buckeye P. L. (Cleveland)	12,694.00	11,170.47
Buckeye P. L. (Lima, etc.)	139,350.89	137,149.47
Indiana P. L.	11,401.12	10,828.41
Cumberland P. L.	271,131.47	282,211.58
N. Y. Transit	20,964.71	21,334.18
Tidewater P. L.	165,122.06	168,664.93
Pure Oil	171,908.20	176,480.50
Emery P. L.	53,721.55	53,064.83
Indian Ref.	98,207.86	104,990.12
Paragon Dev.	222.32	22,718.44
Pittsburgh P. L.	7,380.66	6,486.24
Total	1,923,930.61	1,959,400.15
Daily average	64,131.02	63,206.46

Note—Indian Refining Co. also reported other receipts of 254,924.52 bbls. Paragon Refining Co. had other receipts of 154,728.15 bbls. Paragon Development had other receipts of 2,162.99 bbls. Pure Oil had other receipts of 72,402.22 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipelines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July:

	June, '26	July, '26
Nat. Transit	309,943.34	370,891.32
S. W. Pa. P. L.	410,424.53	409,458.00
Eureka P. L.	157,187.82	194,592.54
Buckeye P. L. (Macksburg)	143,825.27	154,972.89
Buckeye P. L. (Cleveland)	969.85	1,408.19
Buckeye P. L. (Lima, etc.)	889,104.44	895,654.71
Indiana P. L.	963,293.95	995,699.54
Cumberland P. L.	168,812.76	168,426.65
N. Y. Transit	609,865.71	648,783.66
Northern P. L.	156,433.96	185,783.37
Tidewater P. L.	112,918.87	107,643.02
Pure Oil	251,768.14	238,473.30
Emery P. L.	51,241.24	54,161.96
Paragon Ref.	138,895.17	169,136.74
Indian Ref.	411,634.57	372,128.62
Paragon Dev.	24,375.86	24,942.64
Pittsburgh P. L.	7,111.28	7,169.75
Total	4,807,716.76	4,989,308.90
Daily average	160,257.23	160,945.45

Gross Stocks

The gross stocks held by various pipelines in the oil producing sections of New York Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of June and July, were as follows:

	June, '26	July, '26
Nat. Transit	1,092,580.36	1,053,770.84
S. W. Pa. P. L.	691,520.32	683,787.99
Eureka P. L.	1,505,989.62	1,483,121.26
Buckeye P. L. (Macksburg)	417,389.77	415,112.82
Buckeye P. L. (Cleveland)	96,462.04	85,333.91
Buckeye P. L. (Lima, etc.)	2,236,314.81	2,428,415.17
Indiana P. L.	586,955.26	676,702.06
Cumberland P. L.	596,899.55	633,819.77
Southern P. L.	364,453.41	476,270.69
N. Y. Transit	902,682.42	822,714.93
Northern P. L.	463,514.79	433,011.93
Pure Oil	439,660.41	450,205.94
Emery P. L.	38,147.78	37,324.53
Paragon Ref.	41,138.98	36,255.80
Indian Ref.	123,370.73	110,400.30
Paragon Dev.	4,340.27	4,313.95
Pittsburgh P. L.	4,483.60	4,124.64
Total	9,585,904.12	9,734,686.53
Increase	54,146.72	148,782.41

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipelines at the close of June and July showing the gross stocks of the above fields:

	June, '26	July, '26
Pennsylvania	3,941,471.18	4,047,418.29
Lima	878,020.72	859,783.19
Kentucky	1,131,573.86	1,249,214.91
Mid-Continent	3,592,023.19	3,592,567.49
Illinois	42,815.17	75,702.65
Total	9,585,904.12	9,734,686.53

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1923	1924	1925	1926
January	75,790	62,638	56,831	55,630
February	71,092	68,023	60,606	60,394
March	76,592	68,721	60,575	61,644
April	75,614	71,058	63,062	63,019
May	77,366	63,942	59,217	60,580
June	77,593	63,226	61,270	64,131
July	71,879	64,208	62,659	63,206
August	76,910	59,942	59,686	.....
September	72,358	62,930	62,510	.....
October	76,256	64,976	60,995	.....
November	70,762	56,282	59,350	.....
December	69,271	55,814	57,974	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1923	1924	1925	1926
January	171,067	145,518	157,889	156,056
February	164,219	148,732	160,863	156,488
March	185,487	147,098	154,591	156,239
April	170,751	147,611	151,429	152,371
May	177,102	134,997	146,995	160,988
June	173,598	143,010	149,467	160,257
July	168,330	124,187	161,338	160,945
August	142,776	123,120	161,730	.....
September	137,266	127,325	156,719	.....
October	134,597	123,170	145,388	.....
November	131,426	124,400	143,582	.....
December	139,909	151,392	150,162	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1924	1925	1926
January	12,907,202	11,353,276	9,859,176
February	11,844,968	11,192,924	9,579,354
March	10,906,752	11,158,297	9,438,292
April	10,922,742	11,062,082	9,805,851
May	11,335,309	11,207,562	9,531,787
June	11,544,204	11,093,796	9,585,904
July	12,062,361	11,067,453	9,734,687
August	12,221,676	10,974,481	.....
September	12,206,836	10,781,753	.....
October	12,664,061	11,086,850	.....
November	12,268,530	11,068,158	.....
December	11,583,680	10,458,445	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above.

1925—	Receipts	Shipmts.	Stocks
July	2,639.34	3,174.10	11,550.29
August	3,216.97	1,577.99	13,189.27
September	2,929.99	5,352.05	10,767.21
October	2,869.75	1,499.34	12,137.62
November	2,759.66	2,671.32	12,283.40
December	2,661.87	3,441.67	11,503.60
1926—			
January	2,990.16	1,478.35	13,015.41
February	2,580.23	2,776.19	12,819.45
March	2,754.62	1,732.77	13,841.30
April	3,137.40	4,519.68	12,459.02
May	2,933.29	2,096.35	13,295.96
June	3,217.62	1,655.15	14,858.43
July	3,025.86	4,075.11	13,809.18

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, Aug. 1	2,529,844.32
Runs from wells	684,910.04
Other receipts	230,983.04
Regular deliveries	436,288.50
Other deliveries	672,106.54

The amount of Illinois oil run by the Tide Water Pipe Co. in July was 28,580.62 bbls. and deliveries were 53,804.32 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1925—		
July	724,481.26	564,713.19
August	673,652.38	650,649.97
September	706,434.87	510,697.61
October	706,532.00	633,682.32
November	664,556.30	488,449.19
December	665,086.99	578,938.47
1926—		
January	665,243.62	516,083.76
February	632,611.99	506,310.51
March	753,300.74	524,625.95
April	610,957.04	487,604.00
May	682,416.67	498,456.90
June	693,102.34	558,054.94
July	713,490.66	490,092.87

The Tide Water Pipe Co., Ltd., also delivered in July 173,325.78 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	New Orleans Galveston	Port Arthur Baton Rouge	Sabine Pass	Tampa	Total	
April	19,033	5,133	28,333	13,400	22,867	88,767	.....	.....	4,700	.....	4,700	93,467
May	27,065	7,903	15,387	13,452	17,742	81,549	.....	.....	4,032	.....	4,032	85,571
June	24,533	11,000	22,800	34,467	15,167	107,967	.....	.....	.....	.....	.....	107,967
July	15,677	2,903	24,678	12,065	12,516	67,839	.....	.....	.....	645	645	68,484

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	New Orleans Galveston	Port Arthur Baton Rouge	Sabine Pass	Tampa	Total	
April	15,200	14,000	76,833	10,633	39,333	156,000	19,200	24,900	2,000	4,433	50,533	206,533
May	12,387	12,258	75,516	11,645	21,548	133,355	17,710	45,226	1,936	5,677	65,549	198,904
June	15,800	10,800	87,300	6,500	21,267	141,667	25,300	42,267	6,567	3,900	78,033	219,700
July	21,517	7,774	89,548	4,774	26,194	149,806	*13,226	†39,774	‡2,032	4,452	59,484	209,290

*Received at Galveston district. †Received at New Orleans and Baton Rouge. ‡Received at Port Arthur and Sabine Pass.

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
August:	Month	21,055,580	14,441,040	11,936,079	3,558,087	7,450,580	1,858,543	3,260,448	3,177,000	66,677,357
	Daily average	677,599	465,480	385,022	114,777	240,341	56,727	104,853	102,484	2,150,883
September:	Month	20,062,763	14,825,040	11,264,890	3,393,270	6,457,950	1,776,570	3,235,625	3,212,000	64,228,108
	Daily average	668,759	494,168	375,496	113,109	215,265	56,219	107,854	107,067	2,140,937
October:	Month	20,015,076	14,921,199	11,196,511	3,477,146	6,409,281	1,871,830	3,394,990	3,248,000	64,534,033
	Daily average	645,648	481,329	361,178	112,166	206,751	60,382	109,500	104,774	2,081,743
November:	Month	19,095,907	14,590,980	10,650,087	3,221,760	5,927,955	1,758,882	3,088,121	2,992,000	61,325,692
	Daily average	636,530	486,366	355,003	107,397	197,599	58,629	102,937	99,753	2,044,190
December:	Month	19,249,711	14,128,848	10,930,455	3,308,816	6,047,883	1,763,966	3,187,164	3,086,900	61,698,743
	Daily average	620,959	455,608	352,595	106,736	195,093	56,902	102,812	99,552	1,990,282
January:	Month	19,069,563	13,674,813	11,049,715	3,250,536	5,489,604	1,726,390	3,136,280	3,014,000	60,410,901
	Daily average	615,147	441,123	356,442	104,856	177,084	55,690	104,396	97,226	1,948,741
February:	Month	17,163,963	12,392,016	9,943,232	2,877,812	4,756,836	1,584,184	2,778,605	2,931,000	54,427,648
	Daily average	612,999	442,572	355,115	102,779	169,887	56,578	99,236	104,678	1,978,844
March:	Month	18,825,786	14,312,886	11,014,238	3,334,887	5,115,837	1,889,663	3,161,250	3,349,000	61,003,547
	Daily average	608,283	461,706	355,298	107,577	165,027	60,957	101,976	108,032	1,967,856
April:	Month	18,091,771	14,468,190	10,799,760	3,330,120	5,127,510	1,959,570	3,231,404	3,183,000	60,191,325
	Daily average	603,059	482,273	359,992	111,004	170,917	65,319	104,239	106,100	2,006,377
May:	Month	18,667,144	14,507,008	11,940,797	3,516,640	5,482,939	2,231,938	3,459,489	3,317,000	63,122,955
	Daily average	602,166	467,968	385,187	113,440	176,879	71,998	111,596	107,000	2,036,224
June:	Month	18,269,417	14,073,510	11,783,550	3,366,450	5,064,760	2,205,480	3,437,905	3,365,000	61,566,072
	Daily average	608,981	469,117	392,785	112,215	168,822	73,516	114,597	112,167	2,052,202
July:	Month	18,743,199	14,657,482	13,983,759	3,613,267	5,019,892	2,173,813	3,336,664	3,348,000	64,876,076
	Daily average	604,619	472,822	451,089	116,557	161,932	70,123	107,634	108,000	2,092,777
	Total 12 months	228,259,870	170,988,012	136,493,073	40,248,791	68,351,037	22,800,829	38,697,945	38,222,000	744,062,457
	Daily average	625,369	468,460	373,954	110,271	187,263	62,468	106,022	104,718	2,038,527

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Stocks
1,550,29
3,189,27
10,767,21
12,137,62
12,283,40
11,503,60

13,015,41
12,819,45
13,841,30
12,459,02
13,295,96
14,858,43
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36,288,50
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64,713,19
50,649,97
10,697,61
33,682,32
88,449,19
78,938,47

16,083,76
06,310,51
24,625,95
87,604,00
98,456,90
58,654,94
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Total
All Ports
93,467
85,571
107,967
68,484

Total
All Ports
206,533
198,904
219,700
209,290

Total
66,677,357
2,150,883
64,228,108
2,140,937
64,534,033
2,081,743
61,325,692
2,044,190
61,698,743
1,990,282
60,410,901
1,948,741
54,427,648
1,978,844
61,003,547
1,957,856
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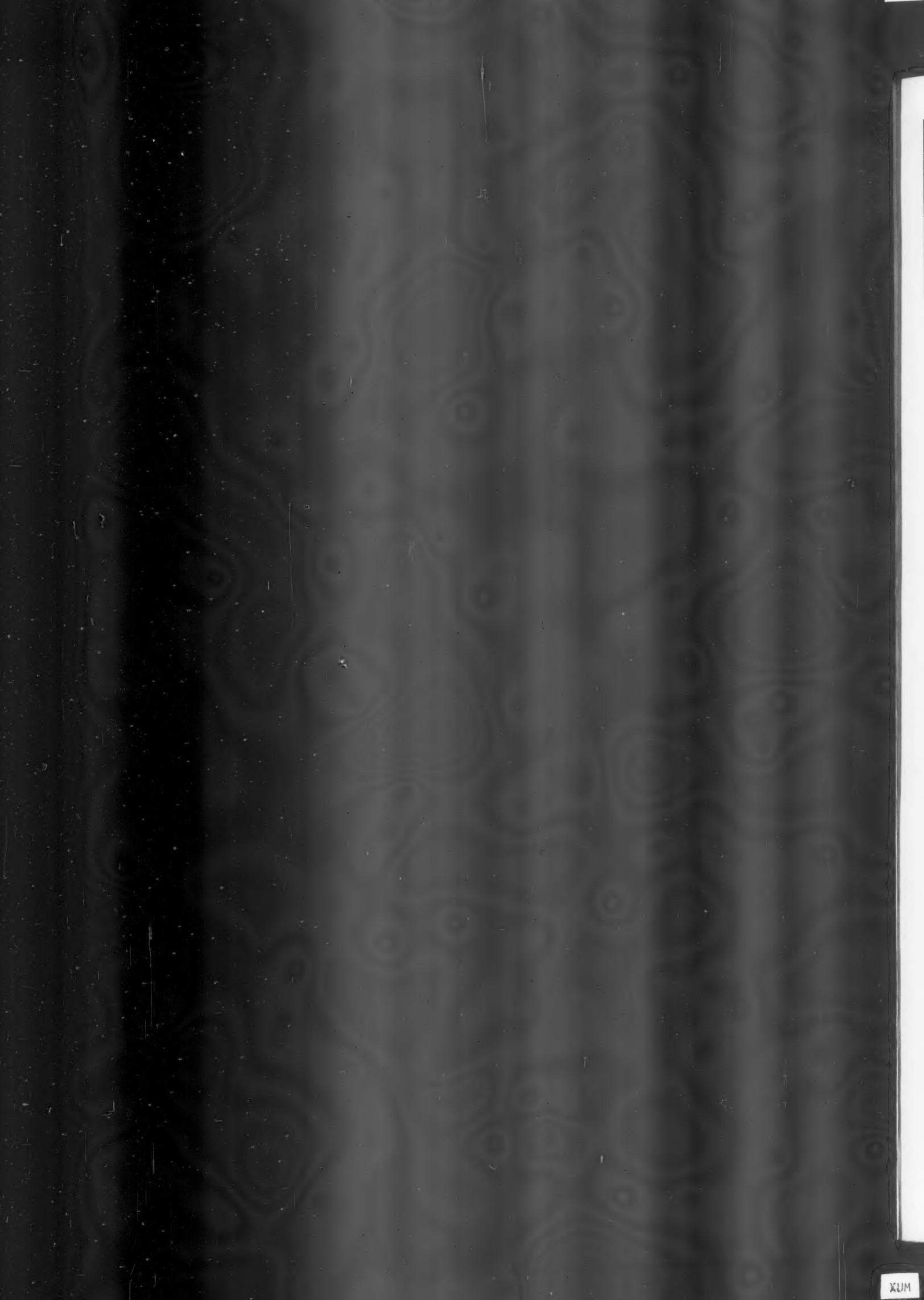


fittings

The same quality of castings, the same accurate machining, the same careful workmanship that we put into Gaso Pumps we also put into Gaso FITTINGS. As a result, they have a special appeal for pipe line officials who build with the future in mind.

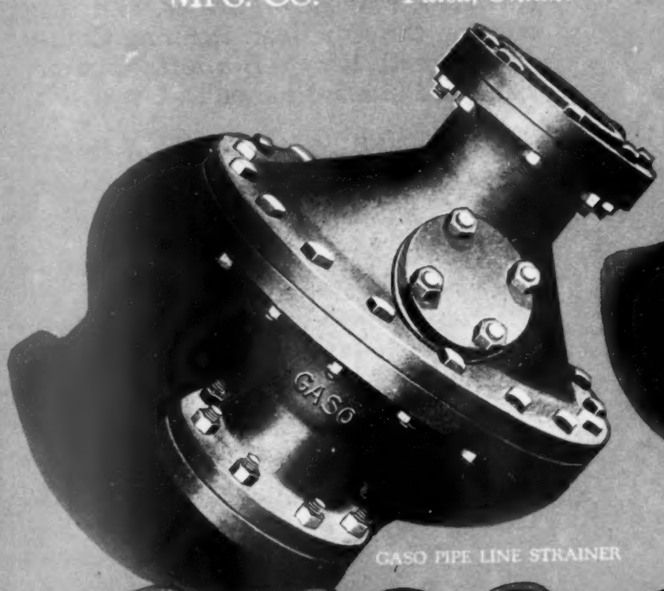
In addition to a comprehensive line of standard fittings—including heater heads, Beckwith swing check valves, liner expanders, river clamps, pipe line strainers, extra heavy flanges and ground joint flange unions—our foundry and pattern shop enable us to figure on special requirements.

Our engineering department is, as always, at your command.

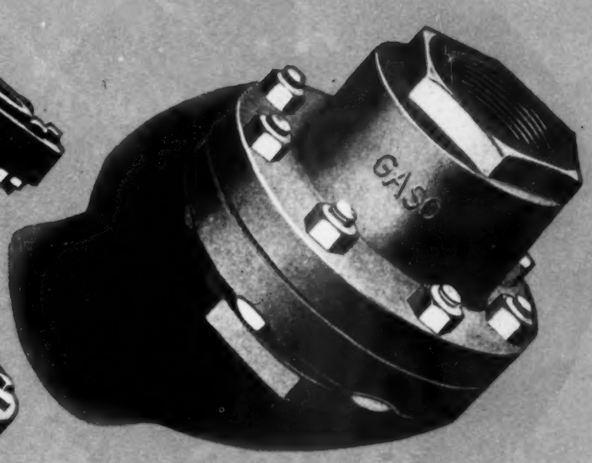
GASO PUMP & BURNER MFG. CO. ·· *Tulsa, Oklahoma*

GASO GRAY IRON TEE

GASO GRAY IRON ELL



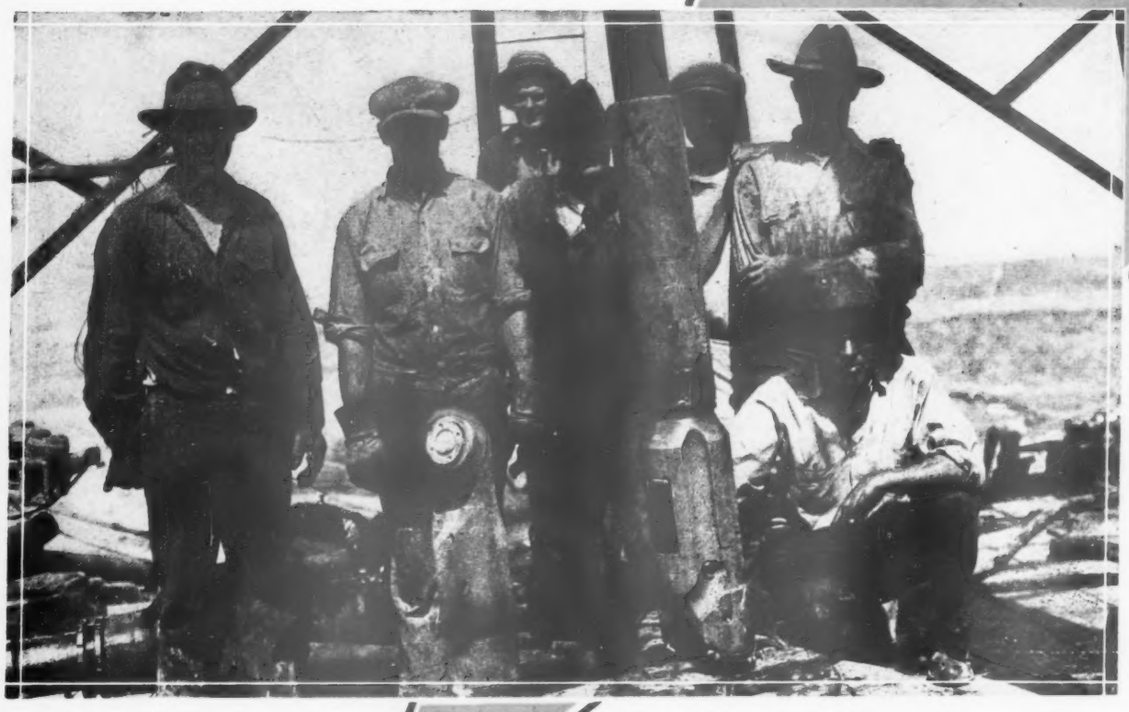
GASO PIPE LINE STRAINER



GASO BECKWITH SWING CHECK VALVE

GASO PUMPS

for every oil industry need



A RECORD PERFORMANCE IN *The Panhandle* MADE WITH HUGHES ROTARY BITS

The above photograph shows E. C. (Shorty) Van Horn, driller, and his crew on the American Refining Company's well No. 9 Burnett, Carson County, Panhandle Field.

2034 feet 8⅝" casing was set in 12 days, using Hughes Disc Bits exclusively.

An 8" Hughes Simplex Rock Bit was then used, making 908 feet of lime (known in the Panhandle as the big lime) in 7 days. Only six sets of Hughes Self-Cleaning Cones were used,—one set making 248 feet.

Last string of pipe was set at 2942 feet, 20 DAYS AFTER SPUDDING IN.

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant
HOUSTON, TEXAS

Export Office
New York City, N. Y.